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An Address.¹

TRAINING THE MEDICAL STUDENT FOR FAMILY COUNSELLING.

By LEIGH COOK,

Retiring President, Western Australian Branch of the British Medical Association.

It has become customary in recent years for the retiring president in his address to describe the medico-political field, and to make observations on, or draw lessons from, the picture as he sees it. Tonight, however, I propose to depart from what has become almost established custom and to discuss one part of the training of doctors. I do so in all humility. Most, if not all, that I have to say has been said before and said much better. However, my personal feeling is that it is quite important that at this time your president should underline and emphasize what he believes to be a fundamental consideration in the training of good family doctors.

It has been with a great deal of pleasure that we have heard some of our new professors expressing their views on medical education. We already know that a fresh

appraisal will be made of the medical curriculum and that our teachers, in assessing our peculiar needs in this State, will not lack the courage to break with the past when they consider this to be necessary. It is with a view to supporting them, and with a view to stating my convictions on one aspect of the training of the family doctor, that these remarks are made. I feel certain that they will be endorsed by many general practitioners.

It has been said, and it is generally agreed, that in his work the family doctor may be called upon to act as priest as well as doctor. We all know what is meant by this. We do not imagine for a moment that the doctor should be ordained or that he should usurp any of the functions of the minister of religion. We all realize that he is often called upon to heal disease of mind and spirit as well as of body. He may do this in cooperation with the local clergy, working as a team. But sometimes, for one reason or another, some patients may not take their problems to ministers of religion, but may unburden themselves and lay bare their souls to the family doctor. The doctor may be called upon to minister to their spiritual need in order to help their physical ill. The better the doctor, the more complete is his conception of the patient as a whole—a human being who feels and suffers mentally as well as physically. The deeper the doctor's imaginative sympathy, the better will he understand and comfort his patient.

Furthermore, family doctoring may concern itself with almost any phase of the life and activities of the patient and his family. Apart from such considerations as Mary's aphasia, Tom's stuttering, Billy's temper-tantrums, the

¹Read at the annual meeting of the Western Australian Branch of the British Medical Association on March 16, 1957.

toddler's persistent thumb sucking and so forth, the family doctor's advice is often sought on matters whose relevance to medicine is far from apparent. He is called upon to be all things to all men—guide, philosopher and friend.

I think you will agree with me that this is a most important part of the doctor's work in the community. Properly carried out it can increase his effectiveness enormously. It cannot be seriously suggested that we should leave such an important part of the work of a young doctor merely to his native wit. Whilst many will have a natural aptitude for this phase of their work, all will benefit from guidance and training. When one considers how the doctor's opinion is treated with respect, almost with reverence, by so many people, on nearly any subject, however unqualified he may be to speak about it, one cannot but hope that his training will be such that his opinion will be well informed on those subjects that matter. At the very least he should learn the limitations of his knowledge. If, in addition, he can learn how and where to become informed, that at least is something. At the best, a training in these aspects of his future work, together with a sense of high moral purpose, would ensure that the future doctor became a very powerful force for good within the community.

In the past some insight into the nature of these problems and some training in the art of ministering to their patients along these lines have been imparted by specialist teachers who themselves have been good general practitioners in their earlier years. Even so, the training was often haphazard, non-coordinated and ill-directed. With the rapid advance of medical knowledge and the evolution of highly specialized branches of medicine and surgery, there will be fewer teachers who have been family doctors themselves. What, then, is proposed to be done to train the future general practitioner for his role of guide, of philosopher and of friend?

A large committee set up by the British Medical Association, and including many of Britain's most eminent teachers, in presenting its report on "The Training of a Doctor", gave as its considered opinion, as long ago as 1948, that this could best be done: firstly, by adding psychology to the range of subjects to be studied in the pre-clinical years; secondly, by bringing the general practitioner into the teaching hospital and giving him a position of responsibility on the teaching staff, or alternatively, by sending the student to the general practitioner to accompany him at his daily work; and thirdly, by giving him specialized post-graduate training directly designed for general practice. To quote: "Qualifications of specialist standing can be achieved only by post-graduate training and in the Committee's view true competence and efficiency in general practice needs special training just as much as other special branches of practice." The Committee stated that ideally a three-year course of post-graduate study should be undertaken before the young graduate should enter upon general practice, and outlined the form that such post-graduate study should take.

To revert to the first of these considerations, the Committee maintained that "psychology is of sufficient importance to demand a special place in the period devoted to the normal"—that is, the pre-clinical years. To quote again, as a result of their investigations they found:

The relevance of knowledge in psychology to social relationships usually received little attention in the medical school, yet it is of the utmost importance to the prospective medical practitioner, and the lack of knowledge of psychology is all too evident in medical practice today. Every doctor should have a general idea of how and why the human individual thinks, feels and acts as he does. He should realize that his patient does not necessarily think and feel the same as he himself does, that all the patients in a hospital ward or in his practice do not feel and react alike, and that within the range of normality there is a wide variation of personality. Preparation for this aspect of medical practice can best be begun in the course of psychology.

A course of psychology, specially designed for the medical student and given by a well selected lecturer early in his training, would prepare the student for further work in his more mature clinical years. Some of our Australian

schools of medicine do give a short course of lectures in psychology. The British Medical Association committee regretted the absence of a suitable text-book designed to meet the special needs of medical students, and also expressed the opinion that lecturers with the ideal background and qualifications would be difficult to find.

At the later, more mature, stage there should be lectures and seminar discussions on the various types of problem with which the student is likely to be confronted when he becomes a young family doctor. In this way, instead of bringing to the solution of these problems a very limited personal experience, he would be enabled to draw on the accumulated experience and knowledge of those who have made them a special study. His would be an informed opinion. At the very least he should become acquainted with where to find the information he may need, and to evaluate the relative worth of various authorities in the subject.

As one illustration of the type of subject that should be introduced, I should like to mention that of guidance in the marriage relationship.

In modern times one can receive training and advice for anything one undertakes, from painting the bathroom to playing golf. Indeed, unless one has the necessary training, one is prohibited by law from doing some things at all, such as tampering with the plumbing. But when it comes to really important things such as governing the nation, teaching university students or entering upon a marriage, there is a complete policy of *laissez-faire*. The politician is not required to undergo any training whatever; university professors, often chosen for their academic achievements, may not be initiated into the fundamentals of teaching; and young people are sometimes launched into marriage, the most important relationship of their lives, in the most haphazard way. Is it any wonder that democratic government so often blunders along; that the lectures of some university professors fall short of what they might be; and that marriages sometimes become so unhappy as to reach breaking point?

Our social workers tell us that the broken marriage is the greatest cause of juvenile delinquency. On the other hand, it has often been said that the strength of the nation rests on the health and happiness and stability of its family life. One of the biggest factors in determining the harmonious marriage is a satisfactory physical relationship. In this field, as in many others, the family doctor with sufficient knowledge, a sense of service and some enthusiasm can accomplish a great deal, especially if he enjoys the cooperation of the local clergy.

The Reverend Brian Macdonald, whose natural interest in human problems had been deepened by his experiences abroad with the Ninth Division and as one of the "Rats of Tobruk", brought to his work in our suburb a quick sympathy and ready understanding, and a wonderful gift of being able to say just the right word of encouragement. We soon found that we had common interests and that cooperation in helping some of our problem patients was easy and natural. This was before the days of the Marriage Guidance Council, although as a result of his efforts a Marriage Panel of advisers to those in difficulty was set up, a panel consisting of a cleric, a doctor, a lawyer, a psychologist, and a social worker.

Now Brian Macdonald held very definite views on the value of preparation for marriage. Moreover, he did a great deal of marrying—especially of members and ex-members of the forces. It was his custom to see the young couple on one or two or more occasions before the event. He pointed out to them that successful, happy marriages were not made in heaven, but here on earth, with a lot of hard work and clear thinking. He discussed the problems that sometimes arose in marriage—the management of finance, divergent views on bringing up children, in-law problems, women's careers, jealousy, emotional difficulties and so on—and of the various ways of solving these problems. He spoke of attitudes of mind with which to approach difficulties when they did arise. He urged upon them the necessity of seeking advice in the right place if things started to go wrong, rather than keeping it all within themselves or discussing it with their

neighbour. He asked them to regard their marriage as permanent. He taught the Christian ideal of marriage as a sacrament. Finally, he inquired if they had made themselves as fully aware as they should be of the physical and sexual implications of marriage, and suggested that otherwise it might be wise for them to discuss these matters with their family doctor. When, for one reason or another, they were unable to do this he offered to make an appointment for them to see me. I saw the couple individually. The time taken varied from an hour and a quarter to two hours, depending on the needs and, to some extent, the mental capacity of the couple concerned. Many of the young people took the opportunity to discuss questions which had been worrying them, or on which their minds were not clear.

It soon became very apparent that this service met a need. So widespread became the demand that the Anglican Archbishop of Perth took the matter up and wrote as follows to the Western Australian Branch of the British Medical Association, asking for the cooperation of our Association in extending this service to other suburbs and enlisting the help of other doctors:

From the Archbishop of Perth,
The Church Office,
Cathedral Avenue,
Perth, Western Australia.
10th December, 1948.

The Secretary,
British Medical Association,
Shell House,
St. George's Terrace,
Perth.

Dear Sir,

For the past four years one of my priests has had the co-operation of a local general practitioner in the preparation of couples for marriage. Couples going to the priest to make arrangements for their marriage have been asked by him whether they wish to take advantage of this service. It has been explained that this is not for the purpose of a medical examination, but for general instruction on the subject of married life, with the emphasis on the physical relationship. Where the couples say they wish to go to the doctor, the priest has made the appointment for them and given them a letter of introduction. No fee has been charged by the doctor.

It has been found that rather more than two out of three couples avail themselves of this arrangement, and they have been unanimous in their appreciation and gratitude. The doctor and priest are more than ever convinced, after their four years' experience of this scheme, that some such planned preparation is beneficial to all, and in some cases vital.

I am writing to ask whether your Association would consider the possibility of co-operating in the development of this idea, which has worked out so successfully on a comparatively small scale. That there is a great demand for it there can be no doubt. The doctor concerned is now continually being approached by couples who have heard from their friends that he is willing to see people in this way. He is in fact interviewing over one hundred couples a year, and lately has been unable to meet all demands made upon his time in this direction.

There may be other medical men in the metropolitan area who would be inclined to work with local clergy on similar lines. There would no doubt be a number of details to be considered if this activity were to be developed, and some of the problems involved might not readily occur to people outside the medical profession.

The whole question of fees would have to be examined carefully.

I feel certain that a large number of the clergy would value very highly the instruction and advice given by members of the medical profession to young couples, as an essential part of their preparation for a happy and successful marriage. If our two professions—medical and clerical—were able to co-operate effectively on these lines, we should be rendering a most valuable service to the whole community.

I hope that your Association may take a favourable view of this suggestion. If so, the next step would be for two clergymen nominated by me to meet two of your nominees, in order to investigate the subject and report.

Yours sincerely,

ROBERT PERTH.

The Branch Council approved of the suggestion in principle and set out to explore the possibilities. Circulars were sent to the profession and preliminary meetings of those doctors interested were held. Unfortunately, the threat of the socialization of medicine arose at this time and in the hectic days that followed the Archbishop's letter was forgotten. Perhaps the time has arrived to consider it once again.

I have elaborated on this particular theme for several reasons. Firstly, it was obvious that here was a service for which there was a big demand, a service which should help to prevent some marriage ills. Secondly, it was surprising to find the number of doctors who expressed themselves as being unable to do this type of work, and to learn that some who thought they had the ability, in fact did not satisfy those who went to them. Thirdly, I have taken it as an illustration of the type of personal medicine which the family doctor is often called upon to practise, and which he could practise so much better if he had the necessary training. No one else in the community is better placed to give this sort of advice. Fourthly, I have emphasized the problem because maladjustment in this regard underlies so many domestic problems. Such problems of one sort or another are the root cause of a large proportion of the symptoms which are presented to the family doctor. If he is not trained in the solution of such problems, how can he cure the symptoms which they cause? If to these we add the symptoms which arise in mother and child from the management stresses arising from the situation of the young mother trying to cope with a group of toddlers without the necessary "know-how", we probably cover many of the causes of psychosomatic disease in the young married woman. How can the young doctor help the mother if he knows little or nothing about the matter himself?

So much, then, for my plea that family counselling is a considerable and important part of a family doctor's work, and that he should receive some training to enable him to provide it more effectively. I am aware that there will be some who will say that the curriculum is already overloaded, and that it is quite impossible to add any more to the student's burden. It is immediately agreed that, without the unloading of less important and redundant material from the curriculum, nothing further can be added. But surely it is more important for the young doctor to be trained to deal with the type of social problem that I have outlined than to take time committing to memory obscure anatomical relationships or complicated biochemical formulae. Whilst it must be granted that the student must have a certain fundamental knowledge of all his pre-clinical subjects, nevertheless there is a growing feeling that it is time the value of much of what is taught and learned in special categories should be reassessed, and that some of the less important detail concerning the body should be excluded to enable the student to learn something of the mind.

May I be forgiven for suggesting also that even in the clinical years there has been a tendency to take the student too far along the road to specialization? Some reorganization in this direction might easily provide the student with the necessary time to study the patient as a person, a human being reacting to certain environmental factors and possessing mind and soul as well as body.

We have been hearing lately a little about overcrowding and competition. I am sure that it is very important that in a medical school too much emphasis should not be placed on academic competition. Once the students have been selected, they should not feel that, in order to retain their places, they have to "swot", to the detriment of a broader education. They should be encouraged to take part in a wide range of extracurricular and sporting activities. In this way they will develop a facility for mixing with other people, which will stand them in good stead when it comes to using the training in social medicine which we have given them. Not only will they then be easy to talk to as family doctors, but also their words of advice will carry far more weight.

As a last word, may I, on your behalf, extend to the teachers and professors of our new medical school our

very best wishes for success in the years ahead? They may derive strength and inspiration from the knowledge that the community has already demonstrated its interest and solid support. We all feel confident that, ultimately, their dreams and ideals will find practical manifestation in the production of doctors of whom this State will feel justifiably proud.

BEMEGRIDE, AMIPHENAZOLE AND BARBITURATE POISONING—THE PRESENT POSITION.

By F. H. SHAW,

Department of Pharmacology, University of Melbourne.

It is now five years since the first animal experiments showed that $\beta\beta$ methyl ethyl glutarimide (bemegride, "Megimide") was a barbiturate antagonist (Shaw *et alii*, 1955). These results have been confirmed (Shaw and Mercier, 1956; Kimura and Richards, 1956; Frey *et alii*, 1956). Two years ago a clinical trial was instituted (Shulman *et alii*, 1955). A subsequent report was made in which the earlier clinical results were confirmed (Shaw, 1955). The present article is written to answer some of the questions which have arisen in the course of the last two years.

The Value of the Treatment.

The value of the treatment may be summed up in the words used in a recent article ("Current Comment", 1957): "... there seems to be no dissenting voice to the view that bemegride and amiphenazole, rightly used, have established for themselves an important place in the management of acute barbiturate poisoning". We have now received from Europe and the United States reports of this treatment in over 200 cases of poisoning.

The two most serious cases of barbiturate poisoning which have come to our notice, and in which the doses of barbiturate taken have been authenticated, were those in which the victims had respectively consumed 16 and 23 grammes of phenobarbitone and barbitone (A. C. Alcock, personal communication).

The first favourable effect to be noticed on the administration of bemegride is a return to normal of the depressed vital reflexes—circulatory and respiratory. Clemmeson (1956) has described seven patients who had respiratory paralysis with total apnoea due to barbiturate poisoning. Each of these seven patients responded to brief treatment with bemegride alone, or bemegride with amiphenazole. Clemmeson points out that total respiratory paralysis very often leads to death and that the previous analeptics were ineffective.

After the return of the above-mentioned functions other peripheral reflexes return, and the patient can no longer be described as being in a coma. The "safe state" has been reached. Consciousness may not necessarily return shortly after this stage if the dose has been large and if the barbiturate is a long-acting member of the series; return of consciousness may be delayed, and relapses may occur after recovery. This necessitates the administration of more bemegride. The duration of the coma depends on many variables—individual variation, elapse of time before treatment (condition of the patient during this period, whether warm or cold), degree of cerebral anoxia experienced *et cetera*. It would be impossible to obtain a set of figures which could adequately serve as a control, and so statistical analysis is impossible. In general the duration of coma is related to the original blood barbiturate level (Wright, 1955). There are conflicting views as to whether the patient returns to consciousness with a higher level of barbiturate in the blood after bemegride treatment than with natural recovery. Holten (1955) maintains that this is so; Pederson (1956) in a larger series holds the opposite opinion. It is a mistaken view to suggest that bemegride is not a barbiturate antagonist unless it increases the excretion (that is, lowers the blood level) of barbiturate. Such an event would indicate mode of action; lack of

such an effect cannot negate the large body of evidence which shows that bemegride is an antidote. (See in particular von Planta, 1956; Holten, 1955; Perinpanayagam, 1955; Worlock, 1956.)

I have always stressed that the patient should receive all the conservative treatment necessary before bemegride is employed. I wish strongly to combat any suggestion that bemegride should be administered without previous admission of the patient to hospital, except perhaps in the mildest cases.

Specificity.

Bemegride is closely related structurally to the barbiturates, and originally the assumption was made that the mechanism of antagonism was one of competitive inhibition. Early experiments had suggested that the action of bemegride was specific towards the barbiturates. Later work has not borne this out. Frey *et alii* (1956) and Kimina and Richards (1956) find that the drug will awaken animals from unconsciousness due to other hypnotic drugs, such as chloral hydrate, chloralose and ethchlorvynol, as well as carbromal (Shaw, unpublished observations). Von Planta (1955) has used the drug clinically in cases of "Doriden", "Persedon" and "Sedormid" poisoning. Certainly the structures of "Doriden" and bemegride are similar, and an exhibition of antagonism is not surprising. More unusual is the case quoted by Sumner (1956). A man had been found unconscious, with no history of head injury or epilepsy. Bemegride restored consciousness. The patient denied having taken any drugs. This is contrary to the findings in one of our earliest instances, in which, in the treatment of a patient who had suffered a head injury, there were toxic signs when bemegride was given. The suggestion was made at the time that bemegride could be used in the differential diagnosis of such cases from those of barbiturate poisoning (Shulman *et alii*, 1955).

The work of Cass (1956) would tend to support the specific action of bemegride. This author showed in rabbits, by means of the electroencephalogram, that bemegride reversed the changes in the wave pattern brought about by barbiturates better than changes brought about by other hypnotics. By way of corollary, the reversal of the barbiturate changes was better if bemegride was used than if picrotoxin or "Metrazol" was used.

Mode of Action.

As was mentioned in the previous section, the first suggestion, based on structural similarity, was that bemegride acted by competitive inhibition. However, not all the actions of barbiturate are reversed by bemegride. The depression of the uptake of oxygen by liver mitochondria induced by barbiturate is not reversed by bemegride (Jalling, 1956). Likewise the depression of the extra oxygen consumption of stimulated brain tissue is unaffected (Professor H. McIlwain, personal communication). The depression of the conduction of the nervous impulse or the motility of the intestine brought about by barbiturates is not counteracted by bemegride (unpublished observations). On the other hand, bemegride does shorten the sleeping time of barbiturate hypnosis in mice and rats (Kimina and Richards, 1956; Frey *et alii*, 1956). Furthermore, the amount of bemegride administered is proportional to the dose of barbiturate. This speaks for the competitive nature of the inhibition. It has been suggested that bemegride acts on a different part of the central nervous system from that attacked by the barbiturates. The reticular activating mechanism has been suggested (von Planta, 1956). It is difficult to see why there should be a relationship between the doses of the two drugs if they are acting at different centres.

On the structural side, Somers (1956) has synthesized a further series of compounds and found several which have some antibarbiturate action. At present it would appear that the underlying structural basis to account for acquisition of this property by the molecule is as follows: (i) The intact glutarimide ring is essential for anaesthetic effect, as the two hydrolysis products have no activity. (ii) The inactivities of the N-substituted derivatives of bemegride demonstrate the importance of the imido

hydrogen atom. (iii) Bemegride is not unique among β substituted glutarimides as a barbiturate antagonist, as three closely related compounds have been shown to have similar activities.

Toxicity.

In animals bemegride is a convulsant drug. My co-workers and I were particularly careful in our first clinical cases, because we thought we detected signs of motor over-activity. Harris (1954) was the first to suggest that bemegride might not be a dangerously convulsive drug in man. This was soon confirmed by a French group of workers (Delay *et alii*, 1956). One of the great advantages of bemegride is that any potential over-activity can be cut short immediately by the administration of thiopentone. Thus experimentation with bemegride is a very safe undertaking. Chronic toxicity tests are at present being undertaken by Dr. G. A. Bentley.

The only toxic effects which have been reported to follow the administration of bemegride are convulsions and certain psychotic disturbances (Kjaer-Larsen, 1956); this author noted delirious psychotic reactions or hallucinations in 15 out of 50 patients treated. An answer to Kjaer-Larsen's findings has already been given by Gershon, Trautner and Shaw (1956). In brief, these psychotic manifestations stand in isolation from all other results. One would have expected 50 such instances (on Kjaer-Larsen's figures) to be reported in the 200 cases of which we have records. Not one case has been mentioned. Kjaer-Larsen admits that most of his patients who showed these episodes were barbiturate addicts. In all probability bemegride can provoke withdrawal symptoms in barbiturate addicts as nalorphine can in morphine habitués. Finally, Kjaer-Larsen refers to bemegride as an "hallucinogen". No such activity was noted by Delay *et alii* (1956) when it was administered to over 200 patients. Furthermore, the hallucinations appeared between four and seven days after the administration of the bemegride. No known hallucinogen has such a delayed action. Indeed, few drugs known to medical science produce an effect after such a protracted interval.

In our earliest cases, when the bemegride was given in excess of that required to produce the "safe state", the patient became either mildly convulsive or showed other signs of motor over-activity. Such convulsions have also been described by Louw and Sonne (1956). However, this report is also exceptional, in that no other accounts of a similar nature have reached us. The motor excitement, if present, is of no consequence, as it is mild and easily controlled by the administration of pentobarbitone or paraldehyde.

The Use of Amiphenazole.

I pointed out in an earlier article (Shaw, 1955) that amiphenazole was included in the early treatments because it was believed, on the evidence of certain animal experiments, that this drug lowered the toxicity of bemegride. More recent experiments throw doubt on the general applicability of this finding.

Amiphenazole is a mild respiratory stimulant in man. From reports received, one would expect benefit in about 50% of cases of non-specific respiratory depression. If in the treatment of a subject of barbiturate poisoning with respiratory depression one did not obtain an improvement in respiratory function with bemegride alone, then one might employ amiphenazole. Louw and Sonne (1956) treated most of their patients with bemegride alone.

Pharmacology.

The pharmacology of bemegride is adequately dealt with by Delay (1956). In summary, it produces in the cardiovascular system a slight increase in blood pressure and pulse rate. It is a mild respiratory stimulant. It has no effect on the digestive system. The main action of the drug is on the central nervous system. No subjective effect is produced when the drug is administered intravenously. It has an epileptogenic, neuro-stimulant effect in man and animals. Colraut *et alii* (1956) observed a lowering of the nervous rheobase after bemegride had been administered intravenously to normal subjects.

Gottstein and Puls (1956) have shown that the depressed cerebral circulation in a patient who had consumed two grammes of barbiturate, together with chlorpromazine and other drugs, was increased when bemegride was given.

Electroencephalographic changes due to bemegride have been described by Peacock (1956), by Delay *et alii* (1956) and by Stoller and Anderman (1957).

McCallum (1955) has been able to isolate a hydroxyl derivative from the ethyl function of the compound from the urine of a subject who had received a large amount of bemegride.

Other Uses of Bemegride.

It is to the French school that we owe much concerning the use of bemegride as a diagnostic aid. The following is a translation of an extract from their paper (Delay *et alii*, 1956):

The commercial solution containing 0.5 per cent of the product is administered intravenously. An initial dose (1 c.c. per 10 kg. of body weight) is injected as rapidly as possible. Thereafter the activation is continued at the rate of 1 c.c. every fifteen seconds, equivalent to 20 mg. each minute.

The duration of this activation depends on the results it is desired to obtain. It is, in fact, possible to obtain the first paroxysmal records, which are often sufficient for diagnosis without having an ineluctable convulsive crisis, or on the contrary to provoke the crisis in order to examine its electrical and clinical expression. It is thus possible to obtain, as the case may be:

1. either the first progressive non-specific abnormalities (search for the "threshold", in accordance with the technique of Ziskind and Bercel);
2. or the first paroxysmal, non-specific abnormalities either spontaneous or brought about by an intermittent luminous stimulus (search for the photomyoclonic threshold, according to the technique of Remond and Gastaut);
3. or specific intercritical abnormalities (search for the focus of the disorder);
4. or specific critical abnormalities.

For these purposes the individual doses are extremely variable and it is by no means unusual for them to be high, and to exceed 50 c.c. (more than 135 c.c. were injected into one of our patients in an attempt to provoke a crisis).

We quote these figures merely for technical convenience; it is obvious that they must not influence the actual diagnosis. On the contrary, it is the clinical aspect of the crisis obtained to which attention should be given in this connexion. This crisis will, as the case may be, consist of a psychomotor crisis, or a convulsive crisis, or a crisis of some other less usual form, but the Megimide does not alter the patient's own particular type of convulsiveness; for example, a psychomotor crisis will not develop into a generalized convulsive accident in a subject who has never experienced one, provided the amount injected is restricted to the dose necessary for obtaining the psychomotor crisis.

As a point of technical interest, we may mention the fact that psychomotor epileptics are activated, as a rule, by high doses, as Gastaut had previously reported in connexion with pentamethylene tetrazole.

The activating effect of Megimide may be cancelled by the intravenous administration of barbiturates, and more particularly of pentobarbitone.

Bemegride has been used to shorten the recovery from thiopentone anaesthesia (Harris, 1955; Bentel *et alii*, 1956). This is of particular advantage for patients who do not require admission to hospital after minor surgical procedures. We have also received two reports of patients who had been known to have prolonged recoveries from thiopentone and who had normal recoveries on a subsequent occasion when thiopentone and bemegride were used. There is also one report of a case of laryngospasm being checked by bemegride. Bemegride has also been used in dental surgery (Bentel *et alii*, 1956), and also to obviate the phase of depression which follows narco-analysis.

Recently bemegride and certain barbituric acid derivatives have been given orally in an attempt to modify the dangerous coma produced by the barbiturates when used in large doses in the "sleep therapy" of certain psychiatric

conditions. By this means it has been possible to give as much as three grammes of phenobarbitone and to produce no more than a light sleep (Trautner *et alii*, 1957; Gershon and Shaw, 1957).

Coirault *et alii* (1956) have used bemegride in the treatment of alcoholic neuritis. The French school (Delay *et alii*, 1956) have also used bemegride for seismotherapy.

Palmer (1956) reports the favourable effect of "Megimide" on a barbiturate addict.

Conclusion.

A review of the results which have been obtained with the use of bemegride as an antidote in the treatment of acute barbiturate poisoning indicates that this compound is a very useful adjunct to the conservative treatment, especially in severe cases.

Bemegride, in man, has few actions apart from that of antagonism to the barbiturates and perhaps certain other hypnotics. The main toxic effect, or rather symptom of excess dosage, is motor excitement. Reports of the production of psychotic manifestations are to be treated with caution. The motor over-activity is easily quietened by the use of either thiopentone or pentobarbitone.

The mode of action of the drug is still uncertain. The balance of evidence would suggest a competitive inhibition of the action of the barbiturate molecule within the central nervous system.

Bemegride has wider application in medicine than the treatment of barbiturate poisoning. It has been used in thiopentone anaesthesia, and to lessen the deep coma produced in barbiturate "sleep therapy" in psychiatric treatment. A whole new field has been opened up by the possibility of using the central stimulating action of bemegride for the diagnosis of cerebral disorders—for example, epilepsy.

Acknowledgement.

I should like to acknowledge the generous gifts of "Megimide" made by Nicholas, Proprietary, Limited, and their permission to make use of the numerous reports which they have received.

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CALOMEL AND PINK DISEASE: PRELIMINARY REPORT.

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A SURVEY of the literature reveals that calomel, the mercurous or "mild" chloride, is generally regarded as non-toxic (Sax, 1951) or relatively non-toxic (Soliman, 1948), and that insoluble mercury compounds, such as calomel, may be excreted by the bowel without appreciable absorption and therefore have no poisonous action (Peters and Van Slyke, 1946). Unfavourable reactions and some deaths from the ingestion of calomel have been recorded from time to time in the medical literature. Warnings against the use of calomel-containing teething powders have been given almost since their inception; but these warnings, until recently, have in general been ignored, the unfavourable reactions to calomel being regarded as due to an individual "hypersensitivity" or "hypersusceptibility".

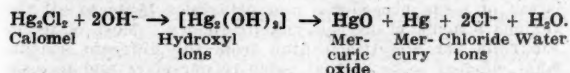
The Toxicity of Calomel Given Orally.

The writer has carried out experimental studies on the oral toxicity of calomel. Calomel and mercuric acetate were given orally in repeated small doses to normal albino rats. Mercury determinations were carried out on the faeces, urine, livers and kidneys by the writer's methods (1955, 1956). It was found that there was as much absorption of mercury (20%) from calomel as from equivalent amounts of mercuric acetate, a certified poison. However, both these drugs elicited only a mild toxic response. When calomel was given to rabbits (fitted with collars to prevent refection), at least 40% of mercury was absorbed. The concentrations of mercury in the blood, liver and kidneys of the rabbits corresponded to the findings of Ashe *et alii* (1953) for rabbits exposed to many times the maximum allowable concentration of mercury vapour for man. This work will be published elsewhere.

Calomel is practically insoluble in water and in acids. In contrast to mercuric compounds, mercurous compounds do not form true organic complexes. Attempts to prepare

complexes of the mercurous ion from a mercurous salt result in the formation of mercuric complexes with separation of metallic mercury (Sidgwick, 1950). Therefore, insoluble mercurous chloride, as such, is quite harmless, and the toxicity of calomel will depend only on its rate of conversion to mercuric compounds.

It can be readily demonstrated that calomel is decomposed by strong alkalis. X-ray examination, supported by data of molecular heats of formation, has shown the products to be an intimate mixture of mercuric oxide and metallic mercury (Sidgwick, 1950). An intermediate, mercurous hydroxide, $\text{Hg}_2(\text{OH})_2$, is probably formed, but it has not been isolated. The reaction can be represented by the following equation:



The rate of decomposition of calomel by alkali will depend on the pH of the medium. Test-tube experiments were undertaken to determine the minimum pH for the rapid decomposition of calomel by alkali in the presence of a decinormal sodium carbonate-bicarbonate buffer system. The minimum pH for the rapid decomposition of calomel by alkali was found to be 8.7. That is, harmless calomel is rapidly converted into toxic mercuric oxide at a pH of 8.7 or higher. The significance of this finding will be demonstrated in the next section.

The pH of the Intestines.

Bollman and Mann (1930) found that the pH figures for the contents of the small intestines of fasting dogs were as follows: duodenum, 7.6 (occasionally 8.0, rarely 6.2); jejunum, 7.0 to 7.6; ileum, 7.2 to 7.8. For several hours after feeding the contents of the duodenum and jejunum were acid, the ileum being neutral or alkaline.

Although parallel figures for infants are not available, it is noted that Clements (1949) cites evidence that the secretion of hydrochloric acid is low in young infants, and that the amount increases as the infant nears its first birthday and even by that age it has not yet reached the amount of secretion in older children. Southby (1949) observed achlorhydria in infants very ill with pink disease.

Dods (1929) studied the pH and flora of normal infants' stools and of stools from 28 infants suffering from acute gastro-enteritis. In the control group, he obtained acid faeces, whereas the average pH of faeces from the group with enteritis was 7.9. The highest pH figures were 8.75 (two infants), 8.5 (seven infants) and 8.0 (five infants). The stools were green or greenish-yellow. No pathogenic organisms were isolated. The high pH was due to the development of putrefactive species of intestinal flora, the bacterial growth being most prolific in the ileum and in the large intestine. Stools of infants suffering from infection with *Shigella dysenteriae* were also green in colour and definitely alkaline in reaction.

Calomel entering the ileum of enteritis patients would be quickly expelled, owing to the looseness of the bowels. Therefore, conditions must be suitable for the rapid decomposition of calomel. It has been demonstrated that calomel is rapidly decomposed at a pH of 8.7. It can be expected that in a few of Dods's enteritis cases calomel would be rapidly decomposed into toxic mercuric oxide. It is significant, therefore, to find the statement that calomel can be given to patients with enteritis, but that some patients appear to be "hypersusceptible" and respond with severe griping and tenesmus (Sollmann, 1948). That is, the hypersusceptibility can be explained in chemical terms.

It is appropriate at this stage to state that undigested protein is acted upon by the bacteria of the large intestine and undergoes so-called putrefactive fermentation (Fulton-Howell, 1946), with the production of alkali.

Pink Disease.

Swift (1914) observed that the first symptoms in his cases of "erythroderma" were generally due to derangement of the digestive apparatus—severe anorexia and

frequent loose bowel actions, with greenish stools containing undigested food. Snowball (cited by Wood, 1921) considered that the disease followed attacks of gastro-enteritis. Southby (1948) reported the following post-mortem findings in 33 fatal cases:

In ten instances there were definite indications of inflammatory processes in the intestinal tract, including gastro-enteritis and entero-colitis, accompanied by enlarged and oedematous mesenteric glands, and, on one occasion, actual ulceration of the mucosa over engorged lymphatic nodules.

From the case histories, the inflammatory processes were mainly localized in the terminal portion of the ileum, but the colon also showed inflammatory processes in some cases. Southby (1948) considered that such lesions had some significance with regard to the aetiology and that the portal of entry of the toxic agent (then unknown) could be by way of this route.

In contrast to Swift's cases, Wood (1921) observed constipation in many of his cases. In other cases the bowels were open regularly.

It appears significant that the early symptoms of a clinical entity should be so dissimilar in different cases. Consequently, the question is raised whether they were predisposing conditions rather than early symptoms. It is interesting to note that Snowball considered that the disease followed enteritis.

Severe anorexia appears to be a common symptom in pink disease. Achlorhydria (*vide supra*) is also reported. The question again arises whether, in some cases at least, these were also predisposing conditions. In this connexion Southby (1949) considered that there was some connexion between achlorhydria and the toxic agent (then unknown).

Calomel and Pink Disease.

Warkany and Hubbard (1948) found mercury in the urine of 92.7% of patients with acrodynia (pink disease), and have shown that acrodynia and mercury poisoning have many symptoms in common. They have also demonstrated that children can remain free of acrodynia, although they receive, absorb and excrete mercury. Other data (Warkany and Hubbard, 1951) gathered from a number of sources have supported their findings. Similar results were obtained in Sydney cases (Clements, 1953; Barrett, 1955), the source of mercury being teething powders containing calomel.

Warkany and Hubbard have also observed that the same child may be unaffected at one time and yet may succumb to acrodynia at another time. They interpret their findings by suggesting individual susceptibility or temporary idiosyncrasy to mercury intoxication.

The following hypotheses are proposed:

1. That some of the symptoms ascribed to pink disease are predisposing conditions to mercury intoxication from the ingestion of calomel, rather than early symptoms.
2. That in addition to calomel the other factor in the aetiology of pink disease is the pH of the intestines.

These hypotheses satisfactorily explain the differences in the clinical picture and provide a toxicological basis for pink disease.

In those enteritis cases in which the pH of the ileum and large intestine was 8.7 or greater, the conditions would be favourable for the rapid decomposition of calomel to toxic mercuric oxide before its expulsion from the loose bowels, which set up the inflammatory processes described by Southby (1948).

In those cases of severe anorexia and achlorhydria, in which the pH of the duodenal contents approximate 8.0, conditions are suitable for the decomposition of calomel and for absorption of mercuric oxide along the whole of the intestinal tract.

Further, in those infants with constipation, prolonged retention of calomel in the intestines would favour increased decomposition of calomel, depending on the pH, followed by increased absorption of toxic mercuric oxide.

The comparatively rare occurrence of the appropriate conditions provides an explanation, on a chemical basis,

why millions of teething powders containing calomel have been sold but relatively few infants have developed symptoms of mercurialism; why the same child may be unaffected at one time and yet succumb at another time.

Summary.

1. The toxicity of calomel given by mouth will depend on its rate of decomposition to toxic mercuric oxide. The rate of decomposition will depend on the pH of the intestines and is rapid at a minimum pH of 8.7.

2. Calomel, as such, is harmless. It is rendered (a) slightly toxic when ingested under normal conditions, (b) chronically toxic (owing to increased absorption of mercury) under certain unusual alkaline conditions in the duodenum, (c) acutely toxic under certain unusual alkaline conditions in the ileum and the large intestine.

3. Evidence is presented which indicates that some of the symptoms ascribed to pink disease are predisposing conditions to mercury intoxication from the ingestion of calomel rather than early symptoms—for example, enteritis, constipation, achlorhydria and/or severe anorexia.

4. In addition to calomel, the other factor in the etiology of pink disease in Australia is an unusually high pH in (a) the ileum and large intestine, occasionally found when the predisposing condition is enteritis, and (b) the duodenum when the predisposing condition is severe anorexia and/or achlorhydria.

5. The "hypersensitivity" to ingested calomel can be explained on a chemical basis.

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SOME BASIC FACTORS IN PSYCHOTHERAPY.

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In attempting this brief survey of some aspects of the science and art of psychotherapy I am afraid I have nothing original to offer. I can only hope to stimulate discussion and trust that our discussion at least will be fruitful. With this in mind, and at the risk of oversimplifying matters, I am going to try to present a formulation of some procedures and principles basic to all the various schools of psychodynamic theory. Most of us in Australia are eclectics, taking from the different schools what we feel to be of real value to ourselves and to each individual patient. It may be worth while trying to synthesize, and organize, and give some form and substance to, what we are doing in our own individual psychotherapy. My emphasis will be on how psychotherapy is conducted rather than on dynamic theory.

Psychotherapy is a process, a series of operations (as the dictionary defines the word "process"), a procedure aiming at a progressive change in the patient to augment his adjustment to life. We try to reduce his symptoms and his problems and help him to increase his capacity to deal with future problems. I use the word "augment" because I want to stress the importance of studying the patient's personality assets and incentives as well as his liabilities. The patient must be aware of his need to change, he must want treatment before he becomes amenable to it. So often we are confronted by the husband, wife or adolescent who has been dragged unwillingly to our rooms by well-meaning spouses or parents in the hope that we can "psychoanalyse" them (O magic word!), and miraculously change them into more desirable ladies or gentlemen.

In discussing the processes involved in psychotherapy, I propose to follow a scheme based on that presented recently by Ingham and Love (1954), of Los Angeles. The processes are dynamic, in that they involve the psychological forces operating in psychotherapy, which can be regarded as a fluid, constantly changing series of situations. There is great variation in these therapeutic situations, in different patients, and in the same patient at different times; but certain basic principles common to all can be distinguished.

There are two fundamental means by which the patient may benefit in psychotherapy—namely, the therapist-patient relationship and insight. Various aspects of these are summarized as follows:

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| 1. The therapist-patient relationship. | <table border="0"> <tr> <td>Rational part:</td> <td rowspan="2">The patient's emotional response to these.</td> </tr> <tr> <td>Irrational part:</td> </tr> <tr> <td></td> <td>Transference</td> </tr> </table> | Rational part: | The patient's emotional response to these. | Irrational part: | | Transference | | | | | | | | | | | | |
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| 2. Insight | <table border="0"> <tr> <td>Therapist's procedures:</td> <td>(i) Instruction</td> <td rowspan="3">Emotional catharsis.</td> </tr> <tr> <td></td> <td>(ii) Creative questioning</td> </tr> <tr> <td></td> <td>(iii) Interpretation</td> </tr> <tr> <td>Patient's procedures:</td> <td>(i) Disclosure</td> <td rowspan="3">Emotional catharsis.</td> </tr> <tr> <td></td> <td>(ii) Uncovering</td> </tr> <tr> <td></td> <td>(iii) Interpretation</td> </tr> <tr> <td></td> <td>(iv) Working through</td> <td></td> </tr> </table> | Therapist's procedures: | (i) Instruction | Emotional catharsis. | | (ii) Creative questioning | | (iii) Interpretation | Patient's procedures: | (i) Disclosure | Emotional catharsis. | | (ii) Uncovering | | (iii) Interpretation | | (iv) Working through | |
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First there is an interpersonal relationship between therapist and patient. This begins with the first greeting and handshake, or even in a telephone conversation before the first appointment. As contact between the two persons continues, some mutual understanding and some emotional response develop. The relationship is always active, in that it either helps or hinders the patient's attempts at adjustment. It provides the setting in which the other therapeutic processes occur, and should give both emotional support for the patient and the stimulus to face his real

¹Read at a meeting of the Special Group of Neurology and Psychiatry of the New South Wales Branch of the British Medical Association on June 5, 1956.

problems. It can be a corrective interpersonal experience for the patient. For example, owing to persistent criticism by his father during his childhood and now to the irritating and oft-repeated advice of his boss, his wife and his in-laws to "pull his socks up", a patient may have developed a feeling of inferiority and a suspicious attitude which distorts his interpersonal relationships with everyone he meets. Slowly his experience with a therapist who is prepared to listen to his problems in a non-critical and accepting way may restore both his self-respect and his ability to get on with other people.

In the interpersonal relationship the therapist may vary his role according to the needs of various types of patient or according to the needs of any one patient at various stages of therapy. For instance, the relatively unintelligent patient may need a more directive, authoritarian approach. On the other hand, some patients who begin almost to wallow in their self-examination during psychotherapy need a stimulus to take an interest in other people and find some purpose in living, if they are to make further progress.

The interpersonal relationship itself may be a useful topic for discussion between therapist and patient during the later phases of therapy. This can help the patient to learn to understand his emotional responses to the therapist, and therefore to other people.

The relationship has two aspects, the rational and the irrational. Admittedly this division is somewhat artificial, but it is useful for purposes of analysis and discussion. The rational aspect seems reasonable to the average layman, is conscious, and is called "rapport". The patient and therapist are "*en rapport*" when both have a feeling of "common focus of attention and mutual understanding" (Ingham and Love, 1954). The therapist has the feeling that the patient is "with" him, and the patient feels confident in the therapist's ability and willingness to understand and help him. Rapport is the logical result of certain behaviour and attitudes on the part of the therapist and of the patient's response to these. It is encouraged by the following factors: (a) The therapist's manifest attitude of warmth, sincerity and desire to help. (b) A non-critical, accepting approach, which encourages the patient to tell even the worst about himself without fear of condemnation. The very fact of having to seek this sort of help is humiliating to many people, especially intelligent people. (c) Absolute privacy and secrecy. It is important to reassure adolescents and marital partners particularly on this point, and to tell them that we want "their side of the story". (d) The fact that the therapist is close to the patient in the interview situation, but usually distant in all other situations. He can therefore reveal his real attitudes to the therapist, whereas he cannot to his relatives and friends through fear of repercussions. (e) The dropping of the usual social taboos on certain topics of conversation—for example, toilet habits, sex practices. (f) The fact that the patient can be reassured that he can depend on the continuity of treatment (barring accident or sickness), that he can pick himself to pieces (a process involving some discomfort) in the knowledge that time will be available to put himself together again. (g) The prestige of the therapist, and the patient's realization of his own improvement during therapy.

The function of rapport is to provide a setting in which other aspects of therapy can develop favourably. Good rapport invites patients to drop their defences and be frank, and enables the therapist to transmit ideas and attitudes which the patient could not otherwise accept.

The irrational part of the relationship is transference. It seems unreasonable at first sight to the average layman, and it is unconscious in the early stages of therapy as far as the patient (and sometimes the therapist, I am afraid) is concerned. Transference results from the patient's irrational and inappropriate projections conditioned by his previous experiences with other people, especially his parents. It results in the "parataxic distortions" of Fromm-Reichmann (1950). The concept of transference adopted here is broader than Freud's, which incorporated

only the patient's repressed sex feelings, both positive and negative, for his parents in early childhood. These feelings, of course, become transferred to the psychiatrist during therapy.

In most other social situations the expression of negative or hostile transference provokes a hostile reaction; but in the therapeutic situation there is a permissiveness which gradually enables the patient to express and realize feelings and attitudes of hate and resentment towards his parents and others which he formerly repressed. He can learn to understand how these old patterns of emotional reaction are transferred onto the "parent-figure" of the therapist, and that, although they may have been appropriate in his childhood, they are now often inappropriate when transferred to other people and allowed to distort his attitudes to them. It is important that the therapist allow the patient to express verbally and to abreact his repressed emotions as far as possible, so that he can be freed to see what lies behind them. This is not always easy for the therapist, because the patient may express his hostility in irritating ways, such as lateness for appointments or verbose irrelevancy when the therapist is pushed for time. Part of the art of therapy is to keep the patient to the point while still encouraging free expression of his emotional difficulties. If the therapist responds with hostility, it merely reinforces the patient's neurotic behaviour. One is reminded of the words of one great psychotherapist:

Ye have heard that it hath been said, An eye for an eye, and a tooth for a tooth: But I say unto you, That ye resist not evil: but whosoever shall smite thee on thy right cheek, turn to him the other also. (Matthew, v: 38, 39.)

When the patient, having found some relief in emotional release, begins to examine his feelings and attitudes, he often experiences a resurgence of anxiety. The forces of repression of previously intolerable feelings are still operating, and thus part of him does not want to face up to these conflicts. This is the phenomenon of resistance. I should like to stress the point that resistance is not just something to be overcome at all costs. It has a function, and that is to slow down the progress of psychotherapy to a speed that can be tolerated by the patient. He may become more insecure and confused for a time, and in these phases will need more than ever the emotional support of his rapport with the therapist. This raises the important point that rapport should be stronger than the transference.

The patient's transference feelings during fairly prolonged and intensive psychotherapy provide invaluable material for discussion, when the patient is ready for such insight, which is generally during the later stages of therapy or any time the therapist feels the patient has enough inner emotional security to handle it. Thus the patient's feelings towards the therapist of trust, suspicion, dependency or sex attraction and their "acting out" (that is, their effect on his behaviour in the relationship) can be discussed as an aid to insight and learning by experience.

In short-term, superficial psychotherapies, great care and adroitness are necessary in handling the inevitable transference situations, even though they may not be so acute. The therapist must try to avoid opening up areas that cannot be handled in the time available.

In long-term or short-term psychotherapies there are pitfalls associated with the transference relationship. First, it may become too intense, so that it becomes partially or wholly uncontrollable, and may retard, disrupt or at least interrupt treatment; for example, the intensity of the patient's feelings may precipitate a psychotic episode. Secondly, it must be reduced and finally resolved before therapy is concluded. I will not discuss ways of resolving the transference here, but if it remains partially unresolved it will continue to distort the patient's interpersonal relationships and approach to reality, and may even be a painful handicap to him. Thirdly, the patient may become too dependent on the person of the therapist. This must be distinguished from dependence on treatment, which is

the realistic use of a therapeutic opportunity and which ceases on recovery. Dependence on the person of the therapist means the unthinking expression of a need for continuing support, and if the patient does not ultimately learn to rely on himself rather than on the therapist, he is likely to relapse however gently therapy is terminated. Finally, there is the problem of counter-transference, in which the therapist's own defensive attitudes, unresolved conflicts or emotional involvement with the patient may distort his objective perspective of the case and reduce his ability to help. If he is unable to handle these difficulties of his own, he should refer the patient to a colleague.

I must recount the ironical words of Masserman (1953):

It is an alert hypnotist who knows who is hypnotising whom . . . and it is also a wise therapist with any technique that knows who is gaining most unconscious satisfaction from the treatment, especially when the latter becomes unnecessarily dramatic, lucrative or prolonged.

We come now to a consideration of insight, the patient's understanding and consciousness of his own feelings and their significance. The development of this self-understanding is a difficult and time-consuming task. It must be stressed at the outset that so-called "intellectual insight" (that is, a superficial verbal and theoretical understanding without real change in deeper motivations and attitudes) is not enough. Some patients recite their intellectual insight off almost parrot-fashion, and one has the feeling that they will continue to behave and feel according to the same old neurotic patterns. Real, effective insight must involve emotions and attitudes, and influence behaviour. As Ingham and Love (1954) state:

It is only on the discovery of the emotional need that is being satisfied by the distorted activity that there is any real change and the recurring tendency that leads him to repeat the undesirable behaviour is overcome.

It is important also to bear in mind that we are not aiming at complete insight, even if it was attainable. What we are after is "optimum insight"—that is, the greatest amount of self-understanding that the patient can absorb and use. Anything more than this is unlikely to help and may even be harmful by confusing and distressing him.

Insight is promoted in most kinds of psychotherapy by certain activities on the part of the therapist and on the part of the patient. The therapist's procedures involve instruction, creative questioning and interpretation. Even in a relatively non-directive type of therapy the therapist will instruct his patient in matters of procedure, especially in the first two or three interviews. The patient needs to feel that the work is proceeding according to some sort of plan, and he needs to know the probable frequency and duration of interviews, the type of material it is most helpful to talk about, and the fact that he himself will really be doing most of the work in learning to understand himself and make a new and more mature approach to his problems. From time to time during therapy there will be a need to instruct him in the principles of psychodynamics, psychosexual development, and so on.

"Creative questions" are directed at the patient's "raw spots" and "blind spots". They are called "creative" because they are intended to stimulate the patient to reach his own insights in areas of conflict which are more or less obvious to the therapist, but of which the patient is wholly or partially unaware. They may contain an indirect suggestion as to the origin and solution of the conflict—for example, "Does your husband resemble your father in some of his ways?" or "Why did you get so upset when your wife went to the pictures with her mother?"

Interpretations of the psychological meaning of the patient's distorted emotional reactions to other people or to the therapist, or of his dreams, free associations and so on may be offered at appropriate times for his consideration. I feel that they should rarely be presented dogmatically and authoritatively, and I often withhold an interpretation even when a patient requests it (as patients often do), suggesting to him that it will be of more value

to him if he discovers it for himself. In using this method, also, the therapist will frequently find that his earlier interpretations of the patient's dynamics were only partly right or even quite wrong. It is usually better therapy to be cautious and niggardly with one's interpretations. Moreover, if the patient is not ready to appreciate and absorb the interpretation, it merely adds to his tendency to intellectualize his emotional difficulties. It is mere instruction and will not promote true insight. Another reason for caution in interpretation is that it will be influenced by the therapist's own leanings in psychodynamic theory, and different therapists may offer different interpretations of the same patient's defensive mechanisms.

The patient's activities in developing insight involve disclosure, uncovering, interpretation and working through. It is a prerequisite for success in all types of psychotherapy, of course, that the patient must be willing to change and to expend effort and experience discomfort at times in the process. It is an arduous task to try to see through our prejudices and to overcome the inertia of the *status quo*. It is hard enough for the psychiatrist to set the example! However, if the patient has sufficient motivation to catch the spirit of this, he tends to follow these procedures.

(a) Disclosure. In this the patient tells things about himself he already knows. This activity tends to predominate in the early stages of therapy and involves the recital of the symptoms and difficulties that brought him for treatment and of the main events and influences of his life. The more cooperative he is, the more frank he will be, but we must continually bear in mind that he finds it hardest of all to talk about the things in his life which involve the most feeling. The really important things, therefore, usually come out in the third, fourth or later interviews, with emotional expression and catharsis. This emotional release relieves the patient of tension and may lead directly to a new perspective and improved understanding of himself.

(b) Uncovering. The term "uncovering" is used when the patient produces material not known to him at the beginning of therapy—for example: "Oh, now I remember . . . when I was about five my father took me to see mother when she was staying with grandma, and I cried when we said good-bye to her . . .", and so on. As fresh associations are stimulated the patient uncovers more and more of this sort of previously repressed material, and it is usually affect-laden and of great value in therapy. Uncovering tends to predominate in the middle phases of therapy.

(c) Interpretation. As has already been indicated, the patient must also be active in the process of interpretation. Whereas the therapist has an advantage in this because of his study and experience, the patient also has an advantage in that he has a more direct awareness of the past events and feelings involved. However, it takes time for the patient to learn to look at himself objectively, and he needs emotional release to enable him to do so. Thus his interpretative activities tend to increase in the later stages of therapy.

(d) Working through. "Working through" is the application by the patient of his new insight and attitudes in actual practice, both in his experiences with the therapist and in the outside world. Real insight should change his motivations and hence his behaviour. He sees that his old ways were inadequate and restricted his freedom, and he now has to try out new behaviour. To give a simple example, a young woman may discover that she has been too dependent on her mother, so she undertakes new social and sporting activities of which she was previously afraid, finding gradually that she can enjoy and succeed in them after all. She will experience a lot of growing pains at first, and it is likely to take her months or years; but if she perseveres, with the help of the therapist, she is "working through" towards maturity and independence. It can also be regarded as a form of reality-testing. The patient has to test the new situations repeatedly and learn from failures as well as successes. She will also have to learn to understand her mother better and, having released

and understood her hostility towards her, to be more tolerant to her. Thus, in working through, one insight leads to another, and progress gains momentum. Obviously, there may be times during the process of working through, especially in conflicts involving aggression, when the patient's less inhibited behaviour will provoke reactions on the part of relatives or friends, if his initial experiments are over-enthusiastic. The limitations of reality and of convention cannot be ignored.

The field of psychotherapy is huge, and there are many aspects I have not considered, for which by this time you may be grateful. But in concluding I should like to ask you and myself a question: What of the therapist himself in this process of psychotherapy? His role is not easy, and not all of us take kindly to it for reasons inherent in our own personality. Doubtless that is why some tend more to the physical therapies, which are less demanding on time, patience and personality resources. Others have too much faith in themselves and their psychotherapy and neglect the resources of biochemical, pharmacological and electrical origin. Of course, physical therapies themselves are of immense psychotherapeutic significance, just as the body and the mind are one. Surely the ideal is to make the best possible use of both approaches. We do not yet know much about the relationship between mind and body, but we do know that both psychotherapy and physical treatments are of benefit to our patients when the correct diagnosis and indications are present. Incidentally, there is great need for more research into the effect of physical treatments such as electroconvulsive and deep coma insulin therapy on the patient's reactions to the psychotherapeutic relationship. This has been discussed by Paul Schilder (1951) and by Leo Alexander (1953). I would suggest it as a subject for a paper to be delivered to this section by somebody who knows a lot more about it than I do.

In psychotherapy the attitudes of the therapist himself should be of great concern to all of us. Leo Alexander goes so far as to say that "Actions and attitudes are frequently more important than words in the practice of psychotherapy". Neurotics, like children, are peculiarly sensitive to the real attitudes and feelings of the therapist, no matter how hard the therapist tries to conceal them, and often they benefit more from the new interpersonal experience than from any new insight the therapist may convey to them verbally, though of course both aspects are closely interrelated. I know I have spoilt some interviews by irritation, haste or fatigue, though I thought at the time I had concealed these feelings, because the patients have reported it to me later. Thus the non-verbal aspects of psychotherapy are of vast importance, and the therapist's real attitudes are conveyed by expression, gesture and tone of voice, sometimes in direct opposition to his words. We may ask ourselves: What are the attitudes most likely to help our patients? How much are they a matter of temperament and how far can they be cultivated? This is a challenge to our psychotherapeutic ability to interpret ourselves. Leo Alexander's statement interested me very much, and may serve as a thought-provoking conclusion:

The actions and attitudes that have been found most beneficial on the basis of psychodynamic understanding are remarkably similar to, often identical with, those derived from true religious attitudes. Modern psychiatry has rediscovered the importance of love, in the spiritual sense of the word, as a therapeutic force . . . The fundamental underlying attitude in good psychotherapy is a basic kindness, concern, and good will toward others, expressed with warmth and force, and applied with enthusiasm.

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SOME ASPECTS OF PSYCHOTHERAPY IN NEUROSES.¹

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WE are being deluged again with a spate of new drugs claiming to bring Nirvana to the anxious, the fearful and the depressed; and our desks are once again burgeoning with a multitude of blotters and pamphlets claiming more and more extravagant virtues for the euphorants and tranquillizers which they extol. A few years ago we passed through a phase of similarly extravagant claims for a series of physical treatments for the neuroses and psychoses, but controlled experiments are gradually relegating them to the limbo where over the years we have seen deposited a continuous series of physical treatments that have had their short day of glory. Their number is legion, but they all had one thing in common—the enthusiasm of their exponents, at times amounting almost to fanaticism.

The more recently introduced bilateral or double-blind control experiments effectively dispose of this ingredient, and the following are some of the more recent results, typical of much in the past:

1. Reserpine in the treatment of anxiety. Control: placebo tablet. "Of ten objective tests of anxiety applied, none showed sufficient improvement to be statistically significant as between the groups" of treated patients and controls (Ferguson, 1956).

2. Intravenous acetylcholine therapy in neuroses. Control: intravenous administration of distilled water. "Almost identical results were obtained in the two groups", and as "the results in the control group compare with those previously obtained by the authors and others using acetylcholine it is suggested that acetylcholine has no specific therapeutic effect in the treatment of neuroses" (Hawkings and Tibbetts, 1956).

Carbon dioxide inhalation therapy. Control: compressed air. "Almost identical results were obtained in the two groups" and "the results in the control group compare with those previously obtained by the authors and others". Therefore it is concluded that "carbon dioxide has no specific effect in the treatment of neuroses" (Hawkings and Tibbetts, 1956).

4. Neurotic patients treated by psychotherapy and carbon dioxide inhalation. "No really significant differences between the two groups were discovered." (Harris, 1954.)

It is not denied that with these therapies many patients improve; but it is stressed that similar results are obtained in similar conditions by inert substances, provided that the total situation remains the same. This leads us to the inescapable conclusion that the common factor is the therapeutic one, and that therefore it is the situation rather than the therapeutic substance which is responsible for results.

Apart from any ad-hoc psychotherapy that may have accompanied the physical treatments, there are psychotherapeutic factors implicit in the situation. "It may well be that enthusiasm is one of the more effective ingredients of the therapeutic situation"—and therefore one expects better results both from the therapist who is enthusiastic in his use of the new drug and from the investigator who is enthusiastic in the controlled experiment.

Suggestion, of course, is always with us, and is a much more potent factor in patients who are aware that they are receiving some new treatment, especially if such treatment involves the awe-inspiring powerful *fu-fu* as represented by carbon dioxide inhalations, intravenous therapies or subcoma insulin therapy.

The patients are generally removed from the home, so often from one of the main sources of present conflict, or reactivation of previous conflicts. If not actually in

¹ Read at a meeting of the Special Group of Neurology and Psychiatry of the New South Wales Branch of the British Medical Association on June 5, 1956.

hospital, they attend frequently for these physical treatments, and as Tibbetts and Hawkings (1956) point out:

If a patient is referred to a psychiatric out-patient clinic and treatment is by "talking" the husband will regard this as confirmation of his views that the symptoms are "imaginary". If, on the other hand, the patient is directed to attend regularly for injections, or inhalations involving unconsciousness, the implication is that real suffering is involved. Family attitudes change, the patient's self-esteem is bolstered by facing and surviving repeated physical ordeals and the scene is set for improvements.

I would suggest also that if even only a minimum amount of personal attention and reassurance is given by the therapist, whilst he is clothed with the authoritarian omnipotence of the administrator of dangerous and threatening procedures from which he immediately proceeds to rescue the apprehensive patient, transference is rapid and so leads to early but temporary improvement. The physical treatments therefore are always aided by implicit psychotherapeutic assistance.

Compared with the flamboyant role of the master electrician, the hurler of thunderbolts and the god of the winds, that of the psychotherapist presents as very unpretentious. To him the role of the psychiatrist is "to cure sometimes, to relieve often, to comfort always"; and his method is "to try often and be content with small gains". He works with the patient, rather than on the patient. His method depends in part upon his early training and in part upon his own personality. He has three instruments—his tongue, his ears and his face. How he uses these will depend upon the school to which he belongs. I do not propose tonight to deal with the various schools, but to discuss some aspects of psychotherapy in reference to the neuroses.

The approach of the therapist will depend, not only upon his personality, but to a great extent upon his aims in therapy: whether he aims at a relief of symptoms, with subjective satisfaction to the patient and a reasonable prospect of the patient's functioning satisfactorily over a reasonable period; or at a complete resynthesis of personality, with the rather Utopian intention of giving the patient full insight into his handling of his emotional problems for the remainder of his life. Of course, only complete and successful psychoanalysis could lay claim to any hope of success from this latter point of view, and I have yet to see one successful case.

Psychotherapy I always consider in the ablative sense—treatment by the mind—rather than in the genitive treatment of the mind—and, in the wide sense, it should include all therapies with the exception of drug therapy and physical therapies. From this we cannot exclude occupational therapy, bibliotherapy, sociotherapy and religiotherapy.

In the narrow sense, however, psychotherapy has come to mean the endeavour to influence symptoms and personality by the interactions of the personalities of the patient and therapist, and by the ability of the therapist consciously to change the patient's reaction and habits of reaction. According to the severity of the condition (and to a lesser extent upon the aims of the therapist), Ziskind (1954) states that "the objectives may be formulated in a series of goals, from the simple to the complex, viz: (a) Acceptance of the psychogenic origin of the symptom. (b) Treatment for situational or precipitating conflicts. (c) Treatment for character or predisposing etiologic factors. (d) Treatment for specific infantile traumata."

I suggest that most frequently treatment devoted to any or all of the first three goals is, if successful, sufficient to obtain satisfactory results, and that treatment of the more complex should always include treatment of the less complex goals.

Throughout treatment it is necessary to bear in mind that we are dealing with emotional illness, and therefore, if we are aiming at insight, we must aim at emotional insight; cold, intellectual insight, whereby the patients pay lip service to our interpretations, frequently cloaked in a smattering of psychological jargon, is worse than

useless. It is necessary to talk the patient's own language, and the wider the interests, and the more catholic his knowledge, the more likely is the therapist to be able to interpret to the patient in a way that has an emotional meaning to him. This emphasizes a point which is essential in successful psychotherapy—the development of what has been called the "we-psychology", so that the patient feels that he is an active partaker in the process and not merely a passive pupil. It is wise therefore for the therapist to limit his own interpretations to a minimum, and to direct investigations in such a way that the patient is led—but in the desired direction—to make his own interpretations.

There are two groups of patients, however, in which one must frequently be prepared to be more directive than is otherwise desirable—those whose intelligence is not sufficiently high to enable them to develop insight, and the alcoholics. The hopeless dependence of the latter, and of other drug addicts, has been recognized by Alcoholics Anonymous, and the psychiatrist must be prepared to be the "higher power" on which they need to depend.

Manipulation of the environment must be accepted as an integral part of psychotherapy when one endeavours to deal with situational conflicts. It is necessary to temper the wind to the shorn lamb, and to endeavour to remedy the disturbing interpersonal relationships which, frequently just below the level of attention, provide the ever-present stimulus to emotional disturbance. Especially here do we find the necessity to meet the patient's dependence needs, and to stimulate the spouse (generally the husband) to take up his share of responsibility and decisions, or to meet the demands of the unsatisfied narcissism of his chosen partner.

In psychotherapy in the narrower sense, there has been a tendency recently to return from the non-directive to the more didactic directive approach—from the permissive-constructive use of the patient's own defects and assets to the authoritarian "thou shalt" and "thou shalt not", only too frequently the outcome of the therapist's own unresolved conflicts. I suggest that this latter approach is completely wrong. Firstly, it does nothing to minimize the patient's dependence but rather increases it in a most undesirable way; worse, it shows a lack of understanding of the fact that we are dealing with faulty habits of reaction—habits frequently of many years' duration, which therefore are not to be jettisoned at a few words of wisdom from the psychiatrist, no matter how well he considers himself suited to the role of Jehovah. Conditioned reflexes cannot be destroyed in a day, nor can new ones be created in a few hours. Only by long-continued and frequently repeated attacks upon these faulty habits can they gradually be eliminated and replaced.

Whitehorn (1955) points out that psychotherapeutic approaches "fall into one of two contrasting patterns; (1) To learn about the noxious events . . . that caused a morbid emotional reaction, to discover the complex pattern that has maintained this state and to undo the cause by insightful disclosure and (2) to learn about the patient's bad patterns of reaction, and also about his assets and potentialities and to evoke their constructive use in a better handling" of the unresolved emotional problems. He points out that the former "fosters the assumption that psychotherapy is designed to cure the psychogenic cause of the morbid reaction. It has higher favour in our science minded culture; . . . it implies higher expectation of radical cure, but also lends itself to charlatan exploitation, deliberate or unconscious."

The second evocative formulation implies that "the actual therapeutic potential is to be found in the patient, not applied by the psychotherapist. This is harder to believe but more aptly descriptive. Psychotherapy is better conceived as a cooperative enterprise for clarifying purposes and modifying attitudes for the greater integration of personality. Insight when it does occur, appears to be the product of assisted recovery rather than the crucial instrument of recovery."

However, this fails to include the value in psychotherapy of catharsis and abreaction—if we take the first to mean

the lessening of emotional tensions by verbalizing and ventilating the problem in a permissive atmosphere, and the second to include the relieving of a traumatic episode with associated emotional release and/or great emotional release associated with the ventilation of some meaningful problem. It is probable that abreaction has a non-specific as well as a specific value—that the outpouring of some repressed emotion assists the channelling-off of other repressed emotions not consciously connected with it. I have found this particularly helpful in phobic states.

In the patient uncovering of the sources of the emotional disturbances, it is wise to be eclectic and to be ready to make use of any or all of the special techniques now available for that purpose. Probably none are more potent and more universally applicable than the orthodox person-to-person interview, which provides so much if one is prepared mainly to listen and to interpret every gesture, every hiatus, every sigh, and to be ready for the subtle nuances of language and expression which so often reveal much more than the words—for "words are made to conceal thoughts". Of the more dramatic techniques, "Sodium Amytal" and "Pentothal" interviews, the intravenous use of "Methedrine", hypnosis, word association tests, free association, ether abreaction and the projective techniques all have their place; but one must beware not to be misled by the transient rapid improvement which frequently follows the suggestive element here, as these methods are more spectacular and the patient more easily thinks "something real is now being done—it is not just talking".

Psychotherapy is time-consuming, it needs endless patience, it carries many disappointments, it tends to be met by impatience on the part of the patient, his relatives and his physician; but it is frequently rewarding, and one no longer suffers the fate of those who rely on physical methods in treating the neurotics and who endure

The toll of dropping buckets into empty wells,
And growing old in drawing nothing up.

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SOME THOUGHTS ON THE CHEMOTHERAPY OF TUBERCULOSIS.¹

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With an increasing number of drugs now becoming available, it is wise to pause and consider some of the theoretical aspects of the chemotherapy of tuberculosis and what is achieved by the use of these drugs. A number of questions pose themselves for answer.

What is the Aim of Chemotherapy?

The ultimate aim of chemotherapy is to sterilize all tuberculous lesions and so eliminate the danger of later relapse. That this is not achieved in many cases is shown by the finding of viable tubercle bacilli on examination of so-called "closed" autopsy and resected specimens.

¹ Read at a meeting of the medical officers of the Tuberculosis Branch of the Health Department, Victoria, on September 28, 1956, at the Royal Children's Hospital Orthopaedic Branch, Frankston.

What is Achieved by Chemotherapy?

In many cases the lesion is walled off with fibrous tissue, and pulmonary cavities are closed by obliteration of the broncho-cavitary junction. This result is achieved in a large percentage of cases by use of all three, or various combinations of two, of the most widely used effective anti-bacterial substances, streptomycin, para-aminosalicylic acid (PAS) and isonicotinic acid hydrazide (INH), but there are a number of therapeutic failures which fall into two well-defined groups.

What Cases Constitute These Therapeutic Failures?

The cases fall into two groups, as follows. Group A comprises patients who persist in secreting organisms which are sensitive to the drugs used; here it must be assumed that the drugs are not reaching the multiplying organisms, or are reaching them in an inactivated state. Group B comprises patients who persist in secreting organisms which after some months become resistant to the drugs used.

What Can be Done for the Therapeutic Failures?

In Group A it is necessary to understand the mechanism of inactivation and metabolism of the drugs and to take steps to overcome this. In Group B other drugs to which the organisms are sensitive must be used.

How Are the Drugs Inactivated and Metabolized?

Streptomycin is inactivated by acid substances, many of which are found in high concentration in the pyogenic membrane lining the cavity wall. Streptomycin is not metabolized.

PAS is also inactivated by acids, particularly para-aminobenzoic acid. PAS is metabolized by acetylation, and the acetylated compounds are inactive against the tubercle bacillus.

INH is not inactivated by any known substances, but is metabolized by acetylation, and once again the acetylated compounds are inactive.

How Can Inactivation be Overcome?

Streptomycin can be made more effective if it is used in larger doses and administered more often; but there is a greater danger of toxicity which such a regime, and the total period during which the drug can be administered at such a dose level is limited.

In the case of PAS, larger doses are usually not tolerated owing to gastro-intestinal upset; but if PAS is always used with INAH, the two compete in the acetylation pathway, with higher effective concentrations of each.

Buffered PAS and PAS resin complexes are now available, and these are better tolerated by the patient.

In the case of INAH again, if this is used with PAS to compete in the acetylation pathway, more effective concentrations are achieved. Also, large doses of this drug can be given if pyridoxine is administered to prevent neuritis.

What Other Well-Tried Drugs Are Available for the Group B Therapeutic Failures?

"Viomycin" can be used when there is resistance to streptomycin. It is less effective and more toxic than streptomycin, but used for relatively short periods—for example, to "cover" a surgical procedure—it is of definite value.

The thiosemicarbazones have some slight anti-bacterial activity. They are toxic to both the liver and the haematopoietic system and therefore must be used with great care. They have been peculiarly successful in the treatment of patients with persistent gross bronchial lesions.

Of the tetracycline group, "Terramycin" is the most effective. To be of any real value it must be administered in large doses (three to five grammes per day), and can therefore be used for only short periods.

What New Drugs Are Available?

Pyrazinamide is more effective than PAS, but less effective than streptomycin and INAH. It is active against organisms resistant to streptomycin, PAS and INAH, and

is particularly effective *in vitro* against organisms resistant to INAH. It has a high toxicity, the most serious effect being on the liver; other toxic signs are joint pains and swellings and febrile reactions.

Cycloserine is a moderately effective drug, about equal in activity to pyrazinamide. It is active against organisms resistant to streptomycin, PAS and INAH. It also has a high toxicity, mental confusion and convulsive seizures being common.

"Dipasic" is an equimolecular combination of PAS and INAH, and is said to be effective against organisms resistant to PAS and INAH; theoretically this is very unlikely. As yet insufficient clinical evidence is available as to its therapeutic value.

Hincomstarch is an equimolecular combination of INAH and thiosemicarbazone with an oxystarch. In animals it is effective against organisms sensitive to INAH, but is not of much value where resistance to INAH is present. The first reported clinical trials of this drug were very encouraging.

The thioethyl compounds have so far been used only in animal trials, and they probably all act by virtue of release of ethyl mercaptan. Good results have been obtained by inhalation of the gas and by administration via a stomach tube.

Isoniazide "G" or gatalone is a compound of glucuronolactone and INAH, and acts probably only by virtue of its INAH radicle. It is therefore probably not effective against organisms resistant to INAH.

Veraside is an INAH compound with veratric aldehyde and acts only by virtue of its INAH radicle. It is not effective against organisms resistant to INAH.

What is the Real Value of Sensitivity Tests?

Many statements made above imply that sensitivity tests are reliable and accurate; but clinical experience has shown that this is so only when direct quantitative sensitivity tests are used. Qualitative sensitivity tests are often misleading.

Are There Any Adjuncts to Present-Day Chemotherapy?

Theoretically, measures which in themselves are deleterious to healing of the tuberculous process, such as physical activity, exposure to sunlight and administration of cortico-steroids, should cause active multiplication of tubercle bacilli and make them more receptive to the bactericidal action of the drugs. There is growing evidence that this is in fact so in practice.

Should All Patients with Tuberculosis be Treated?

There is increasing evidence that patients with all forms of tuberculosis, whether pulmonary or extrapulmonary, derive help from the administration of anti-tuberculosis drugs. In the more "benign" forms of tuberculosis, such as primary infection in school-age children, there is evidence that INAH minimizes, if not prevents, the occasional accidental blood spread of the disease with the occurrence of extrapulmonary lesions.

How Long Should Chemotherapy be Continued?

The problem of the duration of chemotherapy is a vexed one, but most agree that a year's treatment is the minimum, with at least nine months' treatment after all tests of secretion and sputum fail to reveal tubercle bacilli. There are good arguments for two years' chemotherapy after all secretions are free from tubercle bacilli, as the majority of relapses occurred within this period before the days of anti-bacterial control.

Conclusion.

In new cases an intensive chemotherapeutic attack should be launched with two of the usual three drugs, streptomycin, PAS and INAH. Better tolerated forms of PAS are now available and should be used.

When sputum or secretions continue to contain tubercle bacilli and the organisms are sensitive to the drugs used,

doses should be increased and PAS and INAH used together to achieve more effective blood levels.

When sputum and secretions contain tubercle bacilli and the organisms are resistant to the drugs used, other drugs should be substituted.

Chemotherapy should be continued for at least nine months after all secretions are free from tubercle bacilli.

Reports of Cases.

A CASE OF MYXŒDEMA COMA.

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AND

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CLINICIANS of the nineteenth century knew that myxœdematous subjects died in coma and that environmental warmth was important for their well-being (Malden, 1955). Le Marquand, Hausmann and Hemsted (1953), and Summers (1953) have reemphasized this occurrence of terminal coma, and Summers, particularly, has stressed its distinctive hypothermia and association with winter temperatures.

This case of myxœdema coma is reported because the condition is apparently rare today in Australia and elsewhere. No example could be found in the Australian literature, and Brisbane's subtropical climate might seem an unlikely setting for such an event.

Clinical Record.

A widow, aged sixty-five years, was admitted to the reception ward for "mentally ill patients" on June 21, 1955, because of abnormal and irrational behaviour, incoherent and confused speech, and delusions. She was unable to get out of bed or stand up, and had fallen.

On her admission to hospital the physical appearances were those of myxœdema, and large bruises were scattered over her body. The patient could not give a history of her illness; her cerebration was slow and confused and she appeared demented. Speech and all movements were slow. Her voice was husky and croaking. Her head hair was dry, coarse and thinned; her body hair was scanty. Her tongue was enlarged, supraclavicular pads were present, and her skin was pale, thickened and dry, and cold to the touch. This coldness of the body surface persisted and was a definite clinical feature. The oral temperature was reported as 97° F. (36.1° C.). The pulse rate was 62 per minute, and regular, the blood pressure was 230 millimetres of mercury, systolic, and 115, diastolic, and the jugular veins were not visible. Her heart sounds were difficult to hear, and crepitations were present at the bases of both lungs. The liver was palpable three fingers' breadth below the rib margin, and both legs were bruised and swollen with pitting œdema. There was a mild tremor of the hands, and muscle tone and the deep reflexes were diminished; the plantar responses were flexor in type. Inability to stand seemed the result of gross muscular weakness, but inertia was also evident. The urine contained trace amounts of protein, but no sugar.

The hæmoglobin concentration was 9.4 grammes per 100 millilitres of blood, and examination of blood smears showed that the red cells were macrocytic and hypochromic. The white blood cells, which numbered 4500 per cubic millimetre, were normally distributed, and the platelets likewise were normal. Sternal marrow, obtained by aspiration, was poorly cellular, and cells resembling megaloblasts were present. The heart appeared enlarged and the lungs "congested" in an X-ray film of the chest. In an electrocardiogram, of normal voltage, the heart was horizontal, the left ventricle was enlarged, and T waves were irregularly depressed and inverted. The serum

cholesterol content was 292 milligrammes per 100 millilitres. On June 29, after 100 microcuries of I^{131} had been given by mouth, the epithyroidal uptake was 4% and 10% radioactivity at four and twenty-four hours respectively; as the patient was refractory, the collection of specimens of urine was not possible.

With bed rest and mersalyl injections the peripheral oedema resolved: on June 25 there was no significant leg oedema, and on June 30 the liver edge had receded to just below the rib margin. Thyroid replacement was started on June 30 with 30 milligrammes of dried gland (British Pharmacopoeia equivalent) per day, which was increased to 45 milligrammes seven days later.

At first the patient was reasonably cooperative, but from June 23 periods of stupor were reported daily. On July 6 the stupor became lasting. Over this period the body temperature as recorded by the nursing staff, who also noted the coldness of the skin, was almost constantly below 97° F. (36.1° C.). Constipation was obstinate. The pulse rate was 50 per minute and regular on July 6, 40 to 44 per minute and regular on July 7, when the blood pressure was 70 millimetres of mercury, systolic, and zero, diastolic. On this day the patient was no longer cooperative and refused to take fluids by mouth, and the transfusion officer attended because of the patient's collapse and started intravenous therapy; "Plasmosan" (May and Baker), 5% glucose saline and 0.9% saline were given to a total of 1750 millilitres. On July 8, 500 millilitres of citrated whole blood and 1750 millilitres of 3.3% glucose saline and 0.9% saline were also given. From July 8 the patient was comatose and excessively cold, and the body temperature had no effect upon a clinical thermometer. On the morning of July 8 the pulse rate was 40 per minute and regular, and the blood pressure was 50 to 70 millimetres of mercury, systolic. The urine volume over twenty-four hours was 50 millilitres.

On the evening of July 8 the condition was recognized, in consultation, as a well-developed and hopeless myxoedematous hypothermic coma. Tri-iodothyronine and hydrocortisone for intravenous injection were not available for trial. Active external warming of the body was started.

On July 9 the major peripheral pulses were barely palpable, the blood pressure was not indirectly measurable, the heart sounds were almost inaudible and respiration was depressed—the actual movements were infrequent and shallow. External warming had not altered the body temperature, which remained cadaverically cold. The blood urea concentration was 122 milligrammes per 100 millilitres; the serum levels of sodium and chloride were 113 and 92.3 milliequivalents per litre respectively. Potassium levels were high, but not technically certain; the bicarbonate level was not estimated. The patient died in coma on the morning of July 10.

At the post-mortem examination the general appearances were as described above, and there were the histological features of myxoedema. In the thyroid area there was a fibrous remnant containing a nodule 0.5 centimetre in diameter resembling inactive gland. The pituitary and adrenal glands appeared normal in routine preparations. The heart weighed 426 grammes, and the left ventricle was hypertrophied—2.5 centimetres in thickness; the coronary arteries were atheromatous, but not occluded, and there was no evidence of infarction. The lungs were grossly oedematous. The liver weighed 1.53 kilograms and was congested. The kidneys together weighed 170 grammes and the cortices were narrowed; histological examination of preparations revealed nephrosclerosis and acute tubular degeneration. The brain appeared normal, but the basal arteries were atheromatous. The bone marrow was atrophic; the gastric mucosa was normal on macroscopic examination.

Discussion.

The patient had myxoedema due to thyroid atrophy, and her admission to hospital was arranged in the first instance because of "mental illness", a feature of myxoedema emphasized by Asher (1949). There was also considerable muscle weakness.

While Brisbane has predominantly a subtropical climate, temperatures in winter can be low and winds chilling. At the time of the patient's admission to hospital ambient temperatures can be judged from Table I. Winds were blowing, and at a later questioning indoor temperatures had seemed particularly cold at the time to an acclimatized medical attendant. Two sets of figures are shown in Table I, a minimum screen temperature for Brisbane and a grass minimum temperature at a low-lying suburb of Brisbane. This latter reading is included to indicate the degree of cooling that can take place in this region. The temperatures for Brisbane were recorded in a standard Stevenson screen freely exposed in the grounds of the Bureau. Mr. B. W. Newman, who compiled the weather data, stated that values obtained in this way would be similar to those in the hospital grounds. The association of myxoedema coma and a lowered environmental temperature has been constant in cases reported from England (Le Marquand, Hausmann and Hemsted, 1953; Summers,

TABLE I.

Minimum Temperatures (in Degrees Fahrenheit) for Brisbane and a Low-Lying Suburb for the Period June 21 to July 10, 1955.

Date.	Minimum Screen Temperature.	Grass Minimum Temperature.
June—		
21	51.7	34.5
22	47.1	34.0
23	53.1	42.0
24	61.0	51.5
25	51.5	53.0
26	48.0	35.5 patches of frost
27	44.6	28.0
28	44.1	30.5 light frost
29	51.7	40.0
30	47.9	29.0 frost
July—		
1	47.5	36.0
2	45.6	28.2 frost
3	49.6	30.8 frost
4	52.8	30.0 frost
5	51.1	36.0
6	47.8	35.0
7	47.0	31.0 light frost
8	43.0	26.0 frost
9	40.6	25.5 frost
10	43.7	29.5 light frost

1953; Malden, 1955). From the outset, apparently, a dry coldness of the whole body with failure to shiver was striking to the nursing staff, and Malden (1955) has commented upon this cadaveric coldness of the skin and lack of shivering in his cases.

Hypotension, with almost pulseless extremities, developed with the coma, and it appeared that bradycardia preceded the fall in blood pressure. There was no evidence of myocardial infarction at autopsy, and these circulatory changes were present before over-hydration. Similar findings are evident in other case histories (compare Le Marquand, Hausmann and Hemsted, 1953 and 1955; Malden, 1955; Summers, 1953), severe hypotension being found on the patient's admission to hospital in most cases. In one instance in which the coma responded to therapy the blood pressure became normal, although initially it was not measurable (Malden, 1955). In experimental hypothermia progressive bradycardia is associated with a falling blood pressure (Churchill-Davidson *et al*, 1953), and in myxoedema cardiac output is already reduced (Ellis *et al*, 1952).

Coma was established before over-hydration was added, and the concentrations of serum electrolytes, which were terminal, have to be interpreted in terms of ischaemia and over-hydration. Nevertheless, other patients with myxoedema coma uncomplicated by ischaemia (see table in Malden, 1955; Le Marquand, Hausmann and Hemsted, 1955) have had abnormal values for serum electrolytes—elevated potassium level and lowered sodium level, either separately or together.

It remains unfortunate that with our lack of knowledge in this condition another case has been found too late.

Summary.

A case of myxoedema coma occurring in a subtropical climate is described.

A cadaveric coldness of the body was noticed before the coma was established. The coma was associated with progressive bradycardia and hypotension. There was also a failure to shiver.

The weather data are given in a table.

Acknowledgements.

We are indebted to Dr. A. D. D. Pye, General Superintendent of the Brisbane Hospital, for permission to publish this case, and to Mr. B. W. Newman, of the Queensland office of the Bureau of Meteorology, for compilation of the weather data.

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RUPTURE OF THE AORTA DISTAL TO A COARCTATION IN A CHILD.

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COARCTATION of the aorta is a condition which may be fatal at any age. Although it is often symptomless, the diagnosis can usually be made on routine physical examination, which should include palpation of the femoral pulses. When recognized, coarctation is usually amenable to surgical treatment.

Rupture of the aorta rates high among the causes of death in patients with coarctation. Of 304 fatal cases (200 reviewed by Abbott in 1928, and a further 104 by Reiffenstein, Levine and Gross in 1947) rupture of the vessel occurred in 75 (25%).

The rupture usually occurs in the high pressure region proximal to the coarctation, but there have been reported 15 cases of rupture immediately distal to the coarctation (Table I). Another such rupture, occurring in a child, is here recorded.

Clinical Record.

A boy, aged eight years, was admitted to the Royal Children's Hospital, Melbourne, but died before examination could be undertaken. His doctor stated that he had been well until sixteen days before his death, when he complained of nausea and vomiting and of tenderness in the upper part of the abdomen. On examination at that time he was found to be febrile, with some tenderness beneath the right costal margin. He was confined to bed and after several days he seemed to improve. When examined by his doctor five days before his death he was apparently well and was permitted to resume normal activity. On the morning of his death he suddenly vomited a large quantity of bright blood. He was referred to hospital, but died immediately after his admission.

Autopsy.

The body was that of a well-nourished male child of good physical development. There was a striking pallor of the skin and mucous membranes.

The cardiac contour was not widened, but there was a considerable degree of concentric hypertrophy of the left ventricle. No other abnormality was found in the heart, which weighed 150 grammes.

Immediately distal to the point of insertion of the *ligamentum arteriosum*, the calibre of the aorta was reduced to two millimetres by an annular coarctation. Just beyond the coarctation the lumen of the aorta was dilated anteriorly to form a saccular aneurysm, the mouth of which measured 2.0 by 1.5 centimetres. At the mouth of the aneurysm, most prominent along its proximal border, there was a pearly grey linear thickening of the intima. In the fundus of the aneurysm there was a ragged tear along the line of the aorta, six millimetres in length, filled with dark friable blood clot extending into the lumen of the oesophagus (Figure 1).



FIGURE 1.

Aorta opened longitudinally along posterior wall to show coarctation and ruptured aneurysm.

The tissue of the posterior mediastinum surrounding the aneurysm was thickened and oedematous and infiltrated with dark blood.

In the middle third of the oesophagus was an irregular ulcer, the floor of which was formed by blood clot through which a probe was readily passed into the aneurysm. The oesophagus appeared otherwise normal. The stomach and the upper part of the small bowel contained much dark fluid and clotted blood. No other abnormality was detected in the alimentary canal. The other abdominal viscera and the respiratory system appeared normal. The central nervous system was not examined.

Histological Findings.

Serial sections were taken in a vertical plane to include the coarctation, the wall of the aneurysm below it and the ulcerated oesophagus.

Histological examination of these sections showed gross fibro-elastic thickening of the media of the aorta to form

TABLE I.
Summary of Reported Cases of Rupture of the Aorta Distal to a Coarctation.

Author.	Year.	Age of Patient (Years.)	Macroscopic Changes in the Aortic Wall Distal to the Coarctation.	Histological Changes in the Aortic Wall.
Lendet	1858	37	Ruptured saccular aneurysm.	Not described.
Kriegk	1878	48	Dissecting aneurysm.	Not described.
Monckeberg	1907	26	"Loculated pocket at the site of insertion of the <i>ligamentum arteriosum</i> , perforated."	Not described.
Reifenstein	1924	10	Ruptured saccular aneurysm.	Bacterial endarteritis.
Smith and Hansmann	1926	17	Ruptured saccular aneurysm.	Bacterial endarteritis.
Libman	1928	12	Ruptured saccular aneurysm.	Bacterial endarteritis.
Goodson	1937	16	Ruptured saccular aneurysm.	Not described.
Hecker	1939	62	Dissecting aneurysm.	Not described.
Moragues, Moore and Rossen	1942	11	Ruptured saccular aneurysm.	Bacterial endarteritis (?).
Zaslow and Krasnoff	1943	25	Ruptured saccular aneurysm.	Degeneration of the elastica of the media.
Halonon and Aho	1949	20	Ruptured saccular aneurysm.	Bacterial endarteritis.
Bellet and Gelfand	1952	23	Ruptured saccular aneurysm.	"Jet lesion."
Bargi	1934			
Koletsaky	1942			
Barsantini and Bazzano	1938			

Original papers unavailable at the time of preparation.

the coarctation, with slight fibrous thickening of the overlying intima.

The greater part of the wall of the aneurysm was formed by granulation tissue and organizing blood clot. However, near the mouth of the aneurysm some semblance of normal structure persisted. At this point the intima was moderately thickened by the proliferation of fibroblasts. Included in this young fibrous tissue were occasional polymorphonuclear leucocytes. The elastic fibres of the underlying media showed a decrease in tortuosity, loss of their normal refractile character, and a slightly basophilic staining reaction. Between the fibres there was a variable amount of pale-staining basophilic material. There was focal disruption of the elastic fibres, best demonstrated in sections stained by Verhoeff's method.

The adventitia was oedematous and infiltrated with polymorphonuclear leucocytes and macrophages. It was surrounded by blood clot. No organisms were seen in sections treated with Gram's stain.

Microscopic examination of the left ventricle revealed a moderate hypertrophy of muscle fibres. The lungs, liver, kidneys, spleen, pancreas and adrenal glands were of normal appearance.

Discussion.

That the aorta should rupture in the region proximal to a coarctation is scarcely surprising when one considers the high intravascular pressure in this region. That rupture should occur distal to the coarctation, however, is not so easily explained. Two factors are of importance in bringing about such an event. Firstly, a variety of degenerative changes may occur in the wall of the vessel distal to the constriction (Table I), and secondly, hydrodynamic factors exist in this region which exert a very considerable force upon the weakened wall.

Subacute bacterial endarteritis may occur at the site of a coarctation and in the segment of the vessel immediately distal, resulting in mycotic aneurysm formation. The histological evidence for such infection was indisputable in the cases described by Reifenstein, by Smith and Hansmann, by Halonen and Aho, and by Libman, and was strong in that described by Moragues, Moore and Rossen.

Edwards *et al* (1948) described a localized lesion of the intima of the aorta distal to a coarctation, which was characterized by a corrugated patch that projected from the intima into the lumen and by distortion of the media. This they believed to be the result of the continuous

trauma of jets of blood ejected through the narrowed lumen of the coarctation with increased velocity. The case of rupture of an aneurysm distal to a coarctation reported by Bellet and Gelfand was attributed by them to this "jet lesion".

Degenerative changes may occur in the media of the aorta distal to a coarctation apart from the presence of mycotic aneurysm or the "jet lesion". In a series of 85 cases of dissecting aneurysm described by Gore and Seiwert (1952), five were associated with coarctation of the aorta, a frequency too great to be fortuitous. In all five cases the changes in the aortic wall were described as degeneration of the elastic tissue of the media. Focal loss of the elastica was present, frequently with associated accumulation of basophilic mucoid material. In the case of rupture of an aneurysm distal to a coarctation reported by Zaslow and Krasnoff, changes in the media were described which were similar to this. The same may be said of the case here recorded, and the writer has seen similar medial degenerative changes in the descending aorta of a boy, aged thirteen years, who died of hypertensive cardiac failure associated with coarctation of the aorta.

It is apparent that at least three types of lesion may weaken the wall of the aorta distal to a coarctation. This weakened tissue is subjected to a high lateral pressure, a feature that was conclusively demonstrated by Holman (1954), working with models constructed of plastic materials, rubber and animal tissues. He wrote as follows:

A mass of fluid ejected through a narrow and limited constriction under high velocity strikes against a more slowly moving mass of fluid distal to the stenosis resulting first, in the conversion of high kinetic energy into high potential energy or lateral pressure and, second in the lateral deflection of the rapid stream and even in a complete reversal in its direction of flow, thus resulting in a clash of opposing streams that produces eddies of alternating high and low pressures whose repeated impacts over a prolonged period against an elastic wall are capable of inducing structural fatigue and distension of that wall. Accentuating the play of these forces is a third factor; the hydraulic principle that a widening stream causes decreasing velocity which in turn produces increasing lateral pressure. The resulting interplay of these three factors recurring repetitively with each systole in a pulsating stream, and operating in a limited segment of an elastic vessel, produces eventually and inevitably the phenomenon of post stenotic dilation.

It is these hydrodynamic forces, combined with weakness of the aortic wall, that are responsible for the occurrence of rupture of the aorta in the segment immediately distal to a coarctation.

Summary.

Rupture of the aorta is responsible for the death of 25% of patients with coarctation of the aorta, but only in a few does the rupture occur distal to the coarctation.

A case is reported of a boy, aged eight years, who suffered from an apparently mild illness for sixteen days before he died suddenly after a massive hæmatemesis. At autopsy coarctation of the aorta was found, with an aneurysm situated just distal to the coarctation which had ruptured into the œsophagus. The literature on this subject is briefly reviewed, and an explanation based on the degenerative changes which may occur in the vessel wall and on hydrodynamic factors is offered for this apparent paradox of rupture below the point of constriction.

Acknowledgements.

I wish to thank Dr. J. W. Perry and Dr. A. L. Williams for their help and advice. The photograph was prepared by Mr. C. Murphy, of the Photographic Department, Royal Children's Hospital.

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Reviews.

Practical Diagnosis and Treatment of Liver Disease. By Carroll Moton Leevy, M.D., with a foreword by Franklin M. Hanger, M.D., and illustrations by Felix Traugott; 1957. New York: Paul B. Hoeber, Incorporated. 9½" x 6½", pp. 350, with 84 illustrations, including 23 in full colour. Price: \$8.50.

THIS book is a compact monograph based on intimate contact with 1000 consecutive patients with liver disease studied in the Jersey City Medical Center. Chapters 1 to 6 are general, and deal with clinical, laboratory and biopsy diagnosis, differential diagnosis and therapy. Five special chapters cover nutritional and metabolic disease, toxipathic disease (organisms and chemicals), circulatory disturbances and biliary obstruction; neoplastic disease and trauma share the last chapter.

The book as a whole is a very pleasing production. The chapter subheadings and indexing are good, as are the illustrations and tables; but some of the colour plates are rather "fuzzy". Sixteen brief case histories are included, without greatly aiding the text. The book is up to date, and such topical subjects are included as transaminase tests for liver necrosis, chlorpromazine jaundice, spleno-portal venography, cholangiography and ammonium metabolism.

Each chapter has a full bibliography, with, unfortunately, a very scanty sprinkling of non-American references; one hopes that the flow of knowledge across the Atlantic is better than this book would suggest. Also surprising is the bibliographic concentration on the 1946-1956 decade, with a resulting loss of historical perspective; "portal cirrhosis" is not mentioned in the index.

The American viewpoint that most forms of cirrhosis are of nutritional origin is strongly reflected, and what we know as chronic viral hepatitis is scarcely referred to. Coarsely nodular cirrhosis is held to be the result of "post-necrotic scarring"—although we know that large regenerative nodules and fibrosis may characterize the liver of chronic viral hepatitis in the absence of episodes of massive necrosis.

This book can be recommended to physicians who wish to know what Americans have been saying and thinking about liver disease over the past ten years or so.

The Pathology and Surgery of the Veins of the Lower Limb. By Harold Dodd, Ch.M. (Liverpool), F.R.C.S. (England), and Frank B. Cockett, M.S. (London), F.R.C.S. (England), with a foreword by R. R. Linton, M.D.; 1936. Edinburgh and London: E. and S. Livingstone, Limited. 9½" x 7", pp. 471, with illustrations. Price: 65s.

If one could have a text-book on a limited subject, this work could be so described. It covers most comprehensively the whole field of venous surgery of the lower limb. It is beautifully produced, and contains a large number of excellent diagrams and illustrations, some of which are in colour. They are well chosen to help elucidate descriptions that are sometimes difficult to follow. The book is divided into three main sections—(i) history, anatomy and physiology, (ii) pathology and surgery of superficial veins, (iii) pathology and surgery of deep and communicating veins, including thrombosis. There is also a full bibliography.

The historical review is interesting, instructive, and in places a little humbling. The anatomical description covers the many variations that may be encountered. The tests for diagnosing the various valvular defects are fully described and well illustrated. Of special interest is the description with photographs of actual dissections of Cockett's work done in conjunction with the late Elgan Jones on ankle communicating veins.

The treatment of varicose veins by injection and operation is given in detail. It is noteworthy that the difficulties, problems and complications of operations are given prominence, as also is the need for adequate exposure, gentle technique, infinite patience, and attention to detail. The vexed problem of leg ulcers is well covered by a chapter on differential diagnosis and one on treatment (apart from operative treatment). Of special interest in the operative treatment are descriptions of the more recent innovations of stripping of veins with the flexible stripper, and of ligation of "ankle blow-outs". However, the procedure of stripping is over-simplified. Moreover, the valuable procedure of retrograde injection is summarily dismissed as obsolete. It is a pity that stress is laid on an unfortunate article on the subject of retrograde injection by Boyd and Robertson which appeared in 1947 and that their conclusions are accepted. While the description of the operative procedures for closing the reflux from the deep venous system is detailed, clear and full of useful hints, the question of

dealing with the varicose veins themselves is unsatisfactory. This constitutes the book's major weakness.

The chapter on ankle communicators gives full details of the operative technique. This work has revolutionized the approach to the problem of some ankle ulcers. It may not be appreciated, from this description, that many ulcers do not need this surgical treatment, and that operation, in the presence of an open or recently healed ulcer, can result in severe infection in the limb.

There are other debatable points, but this is inevitable in a book such as this, which discusses every aspect of the subject. The dual authorship is apparent, as it is possible to detect many words of wisdom in opinions based on long personal experience, and in new and original work. In certain places the teamwork is not perfect, as the voice of experience has not been loud enough to overcome some immaturities.

No one should attempt venous work without mastering the contents of this book. It shows clearly what to do, and how to do it, and why results have been so bad. They will not continue to be bad if the principles so clearly shown are meticulously followed.

An Introduction to Therapeutics for Chiropodists. By Peter J. Read, F.Ch.S.; 1957. London: Baillière, Tindall and Cox, Limited. 8½" x 5½", pp. 273, with 14 illustrations. Price: 25s.

This small volume should prove of great practical help to students and practitioners of chiropody. It is well written and most instructive, being divided into 17 chapters, followed by alphabetically arranged monographs giving details of the nature, action and mode of exhibition of the agents used in chiropody. The monograph section is followed by two appendices with clear explanation of the pH scale in Appendix I and lists of synonyms and trade names in Appendix II. The medical practitioner reading this book will find little to criticize, if he is fair and is prepared to regard it as an introductory book on treatment for chiropodists.

The author is careful at all times to stress the need for close cooperation between chiropodist and doctor, and exhorts his colleagues to refer promptly to a medical practitioner such conditions as severe "id" eruptions associated with tinea infections and other purely medical or surgical problems. His method of writing and arrangement of the text are good, and we believe that many medical manuscripts submitted for publication are below the standard set in this volume. The approach to treatment is sound, and based on principles that are clearly explained. In this regard the author stresses the dangers of the local use of sulphonamides and antibiotics on the skin, another example of his common-sense approach. This book is highly recommended to chiropodists and students of chiropody, and makes interesting reading for any medical practitioner.

Modern Practice in Anaesthesia. Edited by Frankis T. Evans, M.B., B.S., F.F.A.R.C.S., D.A.; Second Edition; 1954. London: Butterworth and Company (Publishers), Limited. 10" x 8½", pp. 662, with 221 illustrations. Price: £4 10s.

The appearance of a second edition only three years after the reprinting of this book indicates its popularity and the rate of progress of anaesthesia. The text has been revised, parts have been deleted, and useful additions have increased the size of the volume by 56 pages. Current ideas and techniques have been covered successfully; progress in modern anaesthesia is often too fast and erratic to earn a permanent place in such a compilation. The standard of production of the book remains first class.

This edition, like the first, suffers from a wide variation in the quality of the contributions. Chapter 10 and Chapter 11 (relaxants), and Chapter 35 (hypotension) are excellent; but Chapter 5 (apparatus) and Chapter 20 (paediatric anaesthesia) pass briefly over these important aspects of modern practice. Pre-operative preparation is expanded into 35 pages (Chapter 7); but Chapter 16 compresses post-operative care into only eight pages.

The chapter on history deals with each agent chronologically. This approach makes the evolution of anaesthesia difficult to follow. We still await a history of anaesthesia based on the growth of physiological knowledge. It is safe to say that physiology has been mainly responsible for the increasing safety of anaesthetics. The chapters on anatomy and physiology are well written, the movements of the ribs during respiration being particularly well described on page 37. There is a growing need for applied basic sciences, and future editions could emphasize these, leaving descriptive

anatomy and physiology to standard texts. Chapter 17 deals adequately with anaesthetic emergencies, but fails to discuss respiratory arrest under the three most practical headings—muscular paralysis, central depression and obstruction of the air passages. Chapter 18 describes oxygen therapy fairly systematically, but omits any reference to the physiological basis for it, such as oxygen solubility in plasma, the proportion carried by the haemoglobin, the increased resistance to diffusion across an oedematous alveolar wall, and the difficulties encountered in raising the alveolar oxygen tension by simple means. In Chapter 29 (anaesthesia for obstetrics) there is no mention of the transference of anaesthetic agents across the placenta in the discussion on Caesarean section. The resuscitation of the newborn is dealt with very briefly; this section fails to stress the widely accepted importance of sucking all mucus from the air passages and stomach to avoid inhalation into the lungs. The recommended use of stimulants by injection is still open to debate.

One or two confusing statements have crept into the text. On page 497 the writer states that "anaesthesia (for craniotomy) by the carbon dioxide absorption technique has not been described because . . . the circle type of absorber does produce a definite resistance to respiration". Yet on page 501 an illustration from the first edition shows a circle absorber circuit attached to a patient ready for craniotomy. The illustrations are plentiful and, on the whole, clear. However, mention must be made of the inadequate magnification of the spinal analgesia needles shown on page 293. Some readers may find difficulty coping with the curving arrows of the vicious circles which recur so often (pages 154, 159, 165, 397, 400), especially when an intravenous infusion tube becomes involved (page 156, figure 52).

As Dr. Frankis Evans puts it, "the way of an Editor is hard". He is to be thanked for his efforts in compiling such a selection of opinion on present British anaesthetic practice. Australian practice has been very similar in recent years, and we can look forward with interest to future editions of this book.

Elementary Physics. By G. Stead, M.A. (Cantab.), D.Sc. (London), F.Inst.P.; Ninth Edition; 1955. London: J. and A. Churchill, Limited. 8½" x 5½", pp. 548, with 448 illustrations. Price: 21s.

This is the ninth edition and sixth reprint of "Stead" in thirty-odd years—a fine testimony to the usefulness of the book. It is designed to meet the requirements of medical and first-year science students in the universities and for general use in schools. In this edition a number of additions have been made relating to modern developments, and there are a few minor alterations. It remains a very good textbook for its stated purpose.

Clinical Urology. By Oswald Swinney Lowsley, A.B., M.D., F.A.C.S., F.I.C.S., and Thomas Joseph Kirwin, M.A., M.S., M.D., F.A.C.S., F.I.C.S., with drawings by William P. Didusch. Third Edition; Volume I and Volume II; 1956. Baltimore: The Williams and Wilkins Company; Sydney: Angus and Robertson, Limited. 11½" x 8½", pp. 985, with many illustrations. Price: £17 17s. 6d.

This is the third edition of the original "Clinical Urology", of which the senior author, O. S. Lowsley, was co-author. Lowsley, who unfortunately died just before this edition was published, was the first director of the Department of Urology in the New York Hospital. T. J. Kirwin is the Professor of Urology, New York Medical College. The authors claim justly that the enormous changes in urology in the last fifteen years are reflected in this book. With a few exceptions the work includes the very latest ideas on aetiology, diagnosis and treatment. Hundreds of new illustrations by the famous medical illustrator, William P. Didusch, make the work, in the words of the authors, "a veritable atlas of urological pathology and surgical technique, as well as a text book".

The earlier chapters are devoted to diagnostic procedures and anaesthesia in urology. Then, to quote the authors: "Beginning with Chapter VII the organs of the urogenital tract are taken up in their anatomical sequence from without inwards." Why the authors have departed from the classical and logical sequence of kidneys first, and then distally through the tract, is difficult to understand.

The large pages of the two volumes are printed in three columns, so it is somewhat like reading a newspaper, but the publishers claim "easier readability" under this layout. The numerous illustrations of surgical technique are provided with generously large descriptive legends, so that lengthy statements in the text are avoided. The technique of operative urological surgery occupies much space.

This work, on the scientific as well as the clinical side, is one of high quality, and although the predilections of the authors obtrude here and there, they do not exclude descriptions of methods used by many distinguished contemporaries in the urological field. The one thing we might report in this regard is that the work of the late S. Harry Harris, of Sydney, has made practically no impact on American urology. Intricate matters such as hormonal interrelationships and the pathogenesis of various diseases are discussed with singular lucidity and brevity, so that the reader rises from the reading with clear ideas on the subject.

The book ends with a chapter on medical renal diseases, which is actually the province of the internist, but has many overlapping points of practical interest in surgical urology.

Notes on Books, Current Journals and New Appliances.

First Aid: To Injured and Sick. By Halliday Sutherland, M.D., and I. Humphrey Evans, M.B., B.S.: Forty-Sixth Edition; 1957. Edinburgh and London: E. and S. Livingstone. 4 1/2" x 2 1/2", pp. 88, with 45 illustrations. Price: 1s. 6d.

FIRST AID is harder to teach and to practise satisfactorily and safely than many people imagine. The difficulty is to keep it in perspective. The experienced ambulance man knows when to stop, but for the true layman in this field Alexander Pope's "a little learning..." is only too true. For that reason books for lay people on first aid, as indeed on other medical subjects, should say as little as possible, and that which is said should be accurate and harmless. This book does not fulfil these criteria. It does not prohibit the elicitation of crepitus as a sign of fracture, for instance; it advises demulcent drinks for people who have swallowed corrosive poisons; it perpetuates Schäfer's method of artificial respiration. A country such as Australia requires that its first aid books are modern, accurate, sufficient and no more. This book does not meet these requirements.

Whitla's Dictionary of Medical Treatment. By R. S. Allison, V.R.D., M.D., F.R.C.P., D.P.M., and T. H. Crozier, M.D., B.Sc., F.R.C.P., and twenty-six contributors; 1957. Ninth Edition. London: Baillière, Tindall and Cox, Limited. 9 1/2" x 6 1/2", pp. 868. Price: 52s. 6d.

THIS book is an old friend. Like most, if not all, dictionaries (except perhaps the Oxford), it is a curate's egg. For the busy man with some knowledge, its alphabetical list of diseases with therapy is distinctly useful. This well-known book will continue to be widely used.

Aureomycin (Chlortetracycline). By Mark H. Lepper, M.D., with a foreword by Henry Welch, Ph.D., and Félix Martí-Ibáñez, M.D.; Antibiotics Monographs Number 7; 1956. New York: Medical Encyclopedia, Incorporated, Interscience Publishers, Incorporated. London: Interscience Publishers, Limited. 9 1/2" x 6", pp. 156. Price: \$4.00.

THIS is a painstaking, honest-to-goodness monograph which lists 769 references. People who wish to know odd things about "Aureomycin", or who want a good bibliography, would do well to consult this book. Straight reading of the book is heavy going.

Discussions on Child Development: A Consideration of the Biological, Psychological and Cultural Approaches to the Understanding of Human Development and Behaviour. Edited by J. M. Tanner, M.D., Ph.D., D.P.M., and Bärbel Inhelder; Volume II. The Proceedings of the Second Meeting of the World Health Organization Study Group on the Psychobiological Development of the Child, London, 1954; 1956. London: Tavistock Publications, Limited. 8 1/2" x 5 1/2", pp. 272, with 23 illustrations. Price: 28s.

THIS book consists of six presentations of various subjects by different authors and the comments upon them of the discussion group. This inevitably means a lack of continuity in a book, and makes it hard to follow. However, for people closely concerned with the subjects, the book is quite useful. For the doctor who is less closely concerned with the mechanism of psychology, the book is a lucid pointer to the amount which is unknown about mind. Some of the comments in the discussions are irritating, some just banal.

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"Administration of Maternal and Child Health Services: Second Report of the Expert Committee on Maternal and Child Health"; World Health Organization Technical Report Series No. 115; 1957. Geneva: World Health Organization. 9 1/2" x 6 1/2", pp. 28.

The report of a session held in Geneva in December, 1955.

"Australian Cooking for the Diabetic and the Overweight," produced by The Diabetic Association of New South Wales, approved by The Dietetic Association of New South Wales; 1956. Sydney: Australasian Medical Publishing Company Limited. 8 1/2" x 5 1/2", pp. 72.

Specially prepared for Australian conditions.

"A Synopsis of Children's Diseases," by John Rendle-Short, M.A., M.B. (Cantab.), M.R.C.P., D.C.H.; Second Edition; 1957. Bristol: John Wright and Sons, Limited. 7 1/2" x 5", pp. 636. Price: 35s.

The first edition was published in 1953. The book has been revised and partly rewritten.

"Meat Hygiene"; contributors: V. E. Albertsen, R. Benoit, T. Blom, Phyllis G. Croft, C. E. Dolman, H. Drieux, R. I. Hood, M. J. J. Houthuis, A. Jepsen, H. H. Johansen, M. M. Kaplan, S. O. Koch, G. Scaccia Scarafoni, G. Schmid, F. Schönberg, H. Thornton; 1957. Geneva: World Health Organization. 9 1/2" x 6 1/2", pp. 528, with many illustrations, some coloured.

Contains contributions from meat hygiene experts in many parts of the world.

"The Measurement of Body Radioactivity," edited by C. B. Allsopp; 1957. London: British Institute of Radiology. 9 1/2" x 7 1/2", pp. 136, with illustrations and tables.

Papers read at a conference held in Leeds in April, 1956.

"Biology of the Treponematoses," by Thomas Bourne Turner and David H. Hollander; 1957. Geneva: World Health Organization. 9 1/2" x 6 1/2", pp. 280, with illustrations.

Based on studies carried out at the International Treponematoses Laboratory Center of the Johns Hopkins University under the auspices of the World Health Organization.

"Family Mental Health and the State: Proceedings of the 8th Annual Meeting of the World Federation for Mental Health, Istanbul, August, 1955." London: H. K. Lewis and Company, Limited, for World Federation for Mental Health. 8 1/2" x 6", pp. 170. Price: 15s.

A series of papers with brief records of the subsequent discussions.

"The Pathogenesis of Coronary Occlusion," by A. D. Morgan, M.A., M.D.; 1956. Oxford: Blackwell Scientific Publications. 9 1/2" x 7 1/2", pp. 182, with 179 illustrations. Price: 42s.

Offers corroborative evidence for Professor J. B. Duguid's thrombogenic theory of coronary occlusion.

"General Urology," by Donald R. Smith, M.D., illustrated by Ralph Sweet; 1957. Los Altos, California: Lange Medical Publications. 10" x 6 1/2", pp. 336, with illustrations. Price: \$4.50.

Written for the medical student and the medical practitioner who has not specialized in urology.

"Ultramicro Methods: For Clinical Laboratories," by Edwin M. Knight, Jr., M.D., Roderick P. MacDonald, Ph.D., and Jaan Ploompui; 1957. New York, London: Grune and Stratton. 8 1/2" x 5 1/2", pp. 136, with 18 illustrations. Price: \$4.75.

Intended to be a practical manual of methods for hospital use.

The Medical Journal of Australia

SATURDAY, MAY 25, 1957.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given: surname of author, initials of author, year, full title of article, name of journal, volume, number of first page of the article. The abbreviations used for the titles of journals are those adopted by the Quarterly Cumulative Index Medicus. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

MEDICINE, ACADEMIC FREEDOM AND APARTHEID

It is not the province of a medical journal to meddle in politics as such, especially when they are those of the Government of another country. At the same time, the pebble dropped in the pool sends its ripples far, and they may reach corners for which they were not originally intended. When political activity in any country threatens the principles of academic freedom cherished for many generations in every free country, and as a consequence the standards of medical training and practice, then it cannot be ignored. These things tend to be supranational, and certainly have international implications. For this reason we must take notice of what is happening in our sister Dominion of South Africa, as a result of the Government's policy of racial segregation or *apartheid*.

It may be remembered that in 1951 the annual meeting of the British Medical Association was to have been held in Johannesburg in conjunction with a meeting of the Medical Association of South Africa, a body in affiliation with the British Medical Association (see THE MEDICAL JOURNAL OF AUSTRALIA, March 3, 1951, page 341). This was in accordance with the policy of the Parent Body to hold the annual meeting of the Association from time to time overseas in conjunction with overseas Branches or affiliated bodies. Some uneasiness was felt about the fact that the annual meeting of the Association would probably be attended by representatives from non-European countries, and that the racial policy of the South African Government might cause embarrassment. The Medical

Association of South Africa had no reservations about who should attend the meeting, and was prepared to offer unqualified hospitality to all visiting members of the medical profession. However, in view of certain local practices, such as the segregation of members of white and non-white races on public transport, and the fact that visitors to the meeting of the Association would be invited to civic receptions, the Medical Association of South Africa sought from the Minister of the Interior of the Union an assurance that no difficulty would be placed in the way of any member of the British Medical Association who wished to attend the meeting, and in particular that entry into the Union for this purpose would be easy. The Minister replied that he could not give this assurance. As was pointed out at the time, members of the British Medical Association come from every country belonging to the British Commonwealth of Nations, and the Council of the Parent Body could not continue in a course of action which might expose members to affront or discourtesy or other unpleasantness. As a result, the Council cancelled its acceptance of the invitation from the Medical Association of South Africa to hold the joint meeting. This action, it need scarcely be said, reflected in no way on the Medical Association of South Africa, which had throughout acted with the greatest goodwill.

That was the first ripple which passed beyond the boundaries of domestic politics and moved across the general world of medicine, to disappear in a short time and apparently to be forgotten. It was only a ripple. The disturbance of the waters caused by recent happenings in a number of the universities of South Africa is likely to start a much larger wave, with less immediate effect outside South Africa, but almost certainly with more far-reaching consequences. Brief reference was made to this in a leading article in the issue of April 20, 1957; but a somewhat fuller review of the situation appears to be called for. In the Speech from the Throne at the opening of the South African Parliament on January 8, 1957, it was announced that the Government intended to introduce legislation "to provide University training for non-Europeans". The corollary of this was the introduction of racial segregation at the university level throughout South Africa. The universities involved are those of Cape Town and the Witwatersrand, where European and non-European students have mingled and have been able to obtain equal degrees, the University of Rhodes, with its native University College of Fort Hare, and the University of Natal, in which there has been internal segregation, but apparently reasonable equality of opportunity. Of particular interest to us is the Durban Medical School, which was established in 1951 as part of the University of Natal. The intention of its founders was that it should be primarily for non-Europeans, but not exclusively so. However, in order to obtain government financial aid, the condition was accepted that it should be for non-European students only, with certain negligible qualifications. In the early part of this year events moved fairly fast.¹ On January 24, 1957, the Secretary of Education, Arts and Science of the South African Government sent a letter to the Principal of the University of Natal, in which he drew attention to the Government's proposed legislation, and explained that one of the consequences would be that

¹South African M. J., February 23, 1957.

the medical school for non-Europeans (the Durban Medical School) would no longer fall under the control of the University of Natal. It was intended that the University of South Africa should become the examining body for the medical school. Apart from the changes in the control and the examining body, no radical changes were envisaged in respect of the medical school. The letter sought the cooperation of the University with the Department in the transfer of the school when the proposed legislation had been accepted. On February 12 the members of the Council of the University of Natal met and officially expressed their opposition to the Government's decision to remove the medical school from their control, and also to the intention of the Government to remove all classes for non-European students from their control. On February 13 the seven full-time professors in the Faculty of Medicine in the University of Natal issued a statement, in which they pointed out that when they had joined the staff of the University of Natal to initiate the new Faculty of Medicine, they had done so because they believed that the University would ensure full academic development and the maintenance of a high standard of medical education. They went on to say that those objectives had in fact been achieved, and the curriculum of study approved by the University Senate and the South African Medical and Dental Council had been framed on the basis of modern trends in medical education. The student body included Africans from various States of Southern Africa, as well as African, Coloured and Indian students from widely scattered parts of the Union, and despite certain initial difficulties a basis for confidence had been developed and a considerable degree of trust had been established between staff and students. The foundation for that trust had been provided by the inclusion of the faculty within the academic structure of a recognized university. Now, however, without consultation either with the University of Natal or with members of its academic staff, the Government had decided to change the status of the faculty. That disregard of the University constituted in the view of the seven professors a serious challenge to university education in general, and an affront to the University of Natal in particular. While there had been no Government statement about which authority would in future assume control of the medical school, it was significant that the University of South Africa had been asked to become the examining body and only to award the degrees. The University of South Africa catered for external students only. Furthermore, it had been reported in the Press that the relevant Bill was to be introduced by the Minister of Native Affairs, and not by the Minister of Education. The action of the Government was deplored, particularly in the light of the efforts that had been made to establish the medical school on a satisfactory basis, and in view of previous assurances which had been received from the Government, to the effect that there would be no interference with the University's development of the faculty. The comment of the seven professors on this was that if transfer of the control of the faculty without any consultation with the University was not regarded as interference, then indeed moral values had little further meaning. In those circumstances there could be no foundation of trust between university academic staff and the authorities governing higher education in the country.

In the absence of that basic trust, and with the separation of the faculty from a true university environment, they saw little possibility of carrying into effect the initial ideals which had motivated them in joining the University of Natal. Two days later, the Dean of the Faculty of Medicine of the University of Natal received a letter of sympathy and support from the Dean and ten other professors in the Faculty of Medicine of the University of Cape Town, who expressed the view that the Government's action was an affront to the University of Natal, and a grave threat to medical education in South Africa. On February 14 the Natal Coastal Branch of the Medical Association of South Africa protested vigorously to the Minister for Education, and stated that the Branch would find it impossible to cooperate in any way with any authority other than the University of Natal in the staffing of the medical school. The letter received strong support from the Cape Western Branch of the Association.

The Government of South Africa was, however, not to be deterred, and on March 11 it introduced its Bill for university *apartheid*. In a report from Cape Town, published in the *London Times*,¹ it was stated that the Bill provided for the establishment and maintenance by "the Minister" of university colleges for Bantu students and others for Coloured students. Such colleges would prepare students for the examinations of the University of South Africa. The principals, councils and senates of such colleges would be appointed by the Minister, and would, in effect, be civil servants. The Minister would control the running of the colleges, including faculties to be established and students to be enrolled. The Government was to be empowered to transfer control of the non-European medical school of the University of Natal and the native University College of Fort Hare from the University of Natal and Rhodes University respectively to the Minister. Those two colleges would in future be treated like the new colleges already mentioned, and newly enrolled students would be prepared for examinations of the University of South Africa. From 1958 the "open" Universities of Cape Town and Witwatersrand would be allowed to accept new non-white students only with the permission of the Minister. Provision was made for an absolute ban on the registration of non-white students at white universities to come into force in stages, as faculties were provided in the new colleges. The appointment and discipline of staffs of the new colleges would be under the Minister's control. Members of such staffs would be subject to dismissal for the usual reasons of misconduct, and also if they publicly commented adversely upon the administration of any department of the Government of any Province or of the Territory of South-West Africa, or if they were associated with propaganda calculated "to cause or promote antagonism among any section of the population of the Union against any other section of the population of the Union, or to impede, obstruct or undermine the activities of any Government department". The Bill was attacked by the Leader of the Opposition, Sir de Villiers Graaff, on the grounds that it infringed universities' freedom.² He asserted that universities had four freedoms: what to teach, how it should be taught, who might teach and who might be taught. Inter-

¹ *The Times*, March 14, 1957.

² *The Times*, March 12, 1957.

ference such as was contemplated in the Bill was dangerous, because it might lead to further interference and intervention in the internal policy of universities. Subsequently, the Bill was withdrawn on technical grounds.¹ The Government's action apparently was not related to the criticism that the Bill had produced in academic and medical circles, but to the fact that the parts dealing with the Durban Medical School and Fort Hare would have had to go before a Select Committee, which was a lengthy process. This was soon made clear, because on April 8 the Government introduced a revised Bill to enforce university *apartheid*, without the sections on the Durban Medical School and Fort Hare.²

It seems that the Government of South Africa has not altered its intention so far as the Durban Medical School is concerned. The plan is that it shall be brought under the control of the Minister for Native Affairs, that its staff shall be of the nature of civil servants subject to dismissal if they are in any way critical of the Government, and that its examinations will be conducted by the University of South Africa, an external examining body. What this involves has been set out in a report prepared by the Dean of the Faculty of Medicine in the University of Natal, Professor I. Gordon.³ It is stated in the report that the effect will be one of changing what is now broadly based medical education to a narrowly defined and predominantly technical training. Thus a school which has been initiated and developed in accordance with modern educational trends in medicine will at one stroke be profoundly modified. The University of South Africa, as presently constituted, acts only by providing extramural education, and the change subverts the full academic role which the universities now have in South African medical education. It is pointed out that it is not possible to train good doctors unless the academic staff are able to work in an appropriate *milieu*, and the view is expressed that the only *milieu* possible in South Africa is that of the university which has effective and accessible inter-faculty and interdepartmental contacts. If a faculty of medicine is separated from other university faculties and its staff is left in isolation, there must inevitably be a fall in academic standards. The report explains from a first-hand knowledge of conditions in South Africa how the change can affect the growth of medicine in Africa in an undesirable way, particularly from the point of view of European doctors whose future practice will lie amongst the Africans, Indians and Coloured people. The report makes the sad remark that those concerned with initiating and developing the educational experience provided are deeply conscious of the wrongs being done to their students, and ends with the cryptic comment: "It is clear that the future of Medicine in Africa will be determined by Faculties of Medicine in countries other than South Africa."

The rest of the story has yet to be told. The academic world in general will endorse the vigorous advocacy of academic freedom in this context put forward in a leading article by the London *Times*⁴ to which we have previously referred.⁵ The medical profession as a whole will

undoubtedly join in this, and must support its colleagues in South Africa, who both as teachers and as practising doctors have made their position clear. Whatever may be our private views, *apartheid* as a political doctrine is not our business in a medical journal. As the expression of biological theories on race it has little to commend it scientifically, and it is something of a relief to learn that the South African Government has decided not to enforce the extraordinary plan of maintaining *apartheid* in blood transfusion, though there is apparently a strong body of opinion in its favour amongst the white population of South Africa. The thing with which we cannot help but be concerned is the serious threat to academic freedom involved in the racial segregation policy in the universities of South Africa, and the inevitable deterioration in standards of medical training and practice which will follow the separation of all medical training for non-Europeans from a university environment.

Current Comment.

NUTRITION IN PREGNANCY.

TWENTY years ago writers on nutrition in pregnancy in the human female showed a complacent confidence that nearly everything was known about the nutritional problems of pregnancy. Ten years ago they were not so sure. Today there is quite a new approach to the subject, and we know there is still much to learn. In a symposium on nutrition in pregnancy held by the Nutrition Society on September 29, 1956,¹ after an introduction by Professor R. C. Garry, Dr. Isabella Leitch presented a paper on the "Changing Concepts in the Nutritional Physiology of Human Pregnancy", and Dr. A. M. Thomson a paper on "Technique and Perspective in Clinical and Dietary Studies of Human Pregnancy". In her paper Leitch points out that the idea of the fixity of the *milieu intérieur* of Claude Bernard does not hold in pregnancy, that equilibrium may be set at different levels in the same organism, particularly in pregnancy, and that there is an amazing range of variation compatible with healthy life. A pregnant woman may put on no weight at all, or forty-five pounds or more, and may produce a baby at term which weighs from five to ten pounds without much relation to her weight gain. The constituents of the blood may show many variations, some of which may appear to be pathological. A striking example of this is the degree of blood dilution and with it the variation in the percentage of haemoglobin in the blood. The plasma is commonly diluted considerably, and at the same time the number of red cells increases. It is easy to show that this may lead to an apparent anaemia. The ultimate criterion of iron-deficiency anaemia is mean cell haemoglobin concentration, and that is not related to the degree of dilution of the red cell suspension in pregnancy but remains normal in most patients. A pregnant woman with a haemoglobin concentration of 11 grammes *per centum* and a total increase of 15% in haemoglobin is perfectly well and certainly requires no extra iron in the diet. Such a woman will over-breathe, raise the hydrogen ion concentration of her blood and shift the oxygen dissociation curve of her blood to the right, and so unload oxygen at higher tensions and pick up carbon dioxide more readily. In non-pregnant conditions these changes would be pathological, but they are not so in pregnancy.

Other changes taking place in the body can be considered similarly, and Leitch writes: "We must learn to think of criteria of normality as specific, and even phase-specific; so that we may some day say with confidence: this is

¹ Brit. M. J., April 13, 1957.

² Brit. M. J., April 20, 1957.

³ Brit. M. J., March 23, 1957.

⁴ The Times, January 23, 1957.

⁵ M. J. AUSTRALIA, April 20, 1957.

¹ Proc. Nutrition Soc., Vol. 16, No. 1, 1957.

normal in a 24 year old woman in the fifth month of her second pregnancy, and that is normal for a 35 year old primipara at term. And by 'normal' we shall not mean average values, but that the women in question have successfully made the necessary changes in their *milieu intérieur*, that they are well."

Thomson shows how the points brought out by Leitch apply in practice. Diet surveys do not give much information; there are too many variants. The nutritional status of a pregnant woman depends more on her life-experience of diet than upon the nature of the diet she happens to take during pregnancy. If a woman has lived on a good diet for some years before her pregnancy, she will come to little harm on any diet that is not grossly defective; but if she has been on a poor diet, much greater care is necessary in considering her nutritional needs during pregnancy. The foetus grows by virtue of nutrients derived from the maternal diet or tissues, and the hypothesis that birth weight is influenced by nutrition is made possible by the fact that the average birth weights diminish with decline of social status; but the "true" correlation between birth weight and any measure of diet so far tested is small. The vitality of the baby is more important than the birth weight and more easily influenced by maternal nutrition. One would expect that inadequate diets would predispose to lactational failure, but it is quite difficult to prove that poor diet is an important cause of lactational failure. None of the common disabilities of pregnancy are deficiency diseases of classic type, so they are not corrected by the administration of small amounts of highly specific substances.

While it is difficult to demonstrate directly the influence of diet on changes in pregnancy, improvement in the diet of pregnant women was responsible for the dramatic reduction of fetal mortality in Britain during the recent war. However, we have not yet sufficient detailed physiological knowledge to set out complete nutritional requirements in pregnancy and have to depend on diets ordinarily taken by women who have normal pregnancies.

AGING AND OSTEOARTHRITIS.

An interesting study of the changes in bones and joints of old people has been made by F. Bohatirchuk.¹ The material used in the investigation consisted of 500 inhabitants of homes for the aged, 560 human skeletons, the skeletons of 15 old dogs and several bones of cats and rabbits. The principal method of examination was by radiography—both "macroradiography" and "historadiography" or "microradiography". In historadiography the X-ray film is studied by microscopic examination. Both living and dead bones are examined by this means. With a special microtome sections of bone five micromillimetres in thickness may be obtained. The highest magnification obtainable at present is 300. Bohatirchuk found that between 60% and 70% of old people examined by him had no complaints referable to their bones and joints. They regarded muscular stiffness, relatively rapid fatigue, limited movement of joints, and even occasional pain, as normal to their age. If no clinical abnormality is found on examination of such persons, Bohatirchuk regards them as normal. However, radiographic examination shows certain changes. In this series transradiance of bone was increased, compact bone was thinned, trabeculation in spongy bone was diminished, sometimes small cavities appeared in spongy bone, calcification of costal cartilage was increased, roughness and unevenness of bone outlines appeared, and the epiphyses and joint surfaces were enlarged. The changes were uniform through the whole skeleton. In people with osteoarthritis, osteoporosis appeared in earlier decades and increased more rapidly than in normal people. In contrast with the normal, the development of hypertrophic and atrophic changes was more pronounced; in others the hypertrophic changes were advanced, while the atrophic changes were minor.

Furthermore, exostoses tended to be localized to particular joints and to be irregular. Partial fusing of joints occurred. Compression fractures were observed. It is interesting to note that changes in the bones of aging dogs were essentially the same as in the human skeleton. This makes unacceptable the view that the weight of the body in the erect posture is the main cause of hypertrophic changes in old age. Bohatirchuk considers that the term "osteoarthritis" should be reserved for cases in which clinical and radiographic signs of disease are present. He stresses the need for the differentiation of normal from morbid changes in old age, and suggests that "osteoarthritis" as seen in his series may have a number of different causes. Probably as knowledge increases a number of different entities at present grouped under the term "osteoarthritis" will be recognized.

THE DOCTOR AS A PENSIONER.

In these times of the welfare State, in which the urge to provide for the individual from the cradle to the grave grows apace, the medical profession is called upon to play a large part in his care. An amusing contrast with this modern view is provided by an obscure page of history, to which R. Vautier² has turned. Here is to be found a scheme, propounded in great detail by one Dr. Dumont in 1844, and published by Baillière, publisher to the Royal Academy of Medicine of France, for a home for aged, ailing and indigent doctors. Dumont's introduction draws attention to the sorry plight of such persons, who he considers, should not be required to accept the shelter of ordinary charitable institutions. He paints a sad picture of the doctor's lack of monetary recompense for his life's work, which appears to be uniformly hard and self-sacrificing. The fact that some doctors have managed to amass large fortunes (Dupuytren, for example, is said to have left one million francs) is put forward by society in contradiction of the former view. Dumont hastens to assure society that such affluence comes to only very few favoured doctors; the great majority finish their careers with nothing to leave their children. After this preamble, Dumont proceeds to present a kind of blueprint for an institution to care for aged doctors in want; some at least of the details are of interest at the present time.

Dumont's project was for the establishment of such a home on the outskirts of Paris, to receive, shelter and care for all civilian doctors who had practised for at least twenty years in the department of the Seine; to qualify for admission they had to be at least sixty years old, and to be ill, poor, or unable to practise any longer. They could not bring with them wife or child. Candidates were to be strictly scrutinized from the point of view of both physical disabilities and morals; but there was to be no inquiry into their religious or political opinions. (This was in the reign of Louis-Philippe; it is obvious that the last-mentioned provision was well advised.) The board would then decide whether the candidate could be accepted as a pensioner or a half-pensioner (half-pensioners were not to exceed one-quarter of the total number of persons admitted). The director was himself to present the list of applicants, and priority was to be given to the oldest, the sickest and the neediest. Each pensioner or half-pensioner was to be accommodated in a room with a fire, and to receive all the food and every type of care that his condition might require, with linen, footwear, lighting and laundry. Every two years he was to be given an overcoat, a jacket, a pair of dark-coloured trousers and a hat; every four years he was to receive a suit of black clothes. He could also ask for five francs per month for pocket money. Every doctor entering the institution was required to pay 500 francs, either in currency or in furniture (which had to be valued beforehand); he also had to provide the furniture and bedding for his room, and his cutlery ("in silver"). Half-pensioners, in addition, had

¹ *Canad. M. A. J.*, January 15, 1957.

² *Presse méd.*, February 16, 1957.

to pay an annual fee of 400 francs, in quarterly instalments in advance. If circumstances over which they had no control made them default in their payments, they could apply to the board, which might at its discretion either grant them a full pension or reduce the amount they had to pay, or on the other hand dismiss them from the institution. In case of illness, the first attention was to be given by retired doctors, who were on duty for one quarter (like Court physicians), but were not paid. When a death occurred in the institution, if the family would not undertake to pay the funeral expenses, the board was to pay for an interment "with decency but without luxury". At the same time, if the deceased had been a prominent person, the amount could be increased to a final limit of 300 francs. The financial support of the institution was to be ensured in a number of ways, but primarily by an appeal to doctors and charitably minded people living in the department of the Seine. The amount of a subscription was not fixed, but it had to be continued for five years. The board was also to be permitted to accept gifts of furniture, collectors' pieces and books, and also legacies. The institution was to be administered by three bodies—a senior board composed of benefactors (45 members, 30 to be doctors), a committee of censors (three members) and a board of management, presided over by the Dean of the Faculty of Medicine and composed of 12 doctors. The director had wide powers (it is obvious that Dumont aspired to the position), but had to provide substantial securities and a bond of 6000 francs. He had the responsibility of giving out a number of contracts for the provision of such necessities as food, the laundering and mending of linen, heating and lighting *et cetera*. His salary was to be 1500 francs *per annum*, together with 650 francs for each pensioner. The type of food to be provided was also indicated; it was to be wholesome, plentiful and varied, prepared in a manner suitable to a well-to-do household. Lunch, at 10 a.m., was to consist of soup, any dessert left from dinner the previous evening, or eggs, or alternatively, soup, milk, coffee, butter, fruit and preserves. Dinner at 5 p.m. was to consist of soup, meat, fish or poultry, vegetables, a side-dish or salad, and a dessert of fresh or dried fruit, cheese or pastry according to the season. Half a bottle of claret (at least one year old) was allowed daily for each person.

There is no doubt that the worthy Dr. Dumont did his best to "sell" his project; the brochure that he produced has the subtle aroma of a directorship thesis. The pity is that we do not know whether his scheme came to fruition; if it did, let us hope that the coveted position was his.

DIAGNOSTIC AIDS IN MYOCARDIAL INFARCTION.

ACCOMPANYING the uncomfortable frequency of myocardial infarction is the fact that diagnosis is, on the whole, seldom in doubt. The overwhelming majority of cases present with dramatic signs and symptoms, and a confident diagnosis may be made by senior relatives of the patient. However, elucidation of dubious cases, especially in hospital, is often accomplished with diagnostic aids such as a leucocyte count and an estimation of the sedimentation rate. The latter is a test which has had quite a chequered career; and at times, far from being a procedure which could be carried out on a ward table, it has become quite esoteric. Blood has been conveyed from the patient, by means of special bottles, to the pathological laboratory, and there has undergone manoeuvres of considerable complexity. However, as a consequence of much detailed discussion and argument over many years, few people, if any, would regard the test as one of precision. It is once again performed upon the ward table, and provides quick and useful results.

It is, of course, well known that plasma fibrinogen is closely connected with sedimentation rate. R. L. Myers¹ in 1948 showed that plasma fibrinogen content was

increased in myocardial infarction. Apart from the inflammatory response, necrosis of tissue has proved the most powerful stimulus to an increase of plasma fibrinogen production. Since the sedimentation rate depends upon other factors besides the fibrinogen content of plasma, it has been suggested that estimation of plasma fibrinogen content should be made in suspected cases of myocardial infarction rather than the sedimentation rate. This proposition has been investigated by T. Holger-Madsen.² A series of 28 patients, aged from fifty years to eighty-five years, with acute coronary occlusion has been studied. There was no clinical or electrocardiographic doubt about diagnosis. Estimations of plasma fibrinogen content and sedimentation rate were made. Fairly good correlation was found between them, but there was no evidence that estimating fibrinogen was of any greater value. Since the fibrinogen estimations involved complex procedures, whilst the sedimentation rates were performed by Westergren's technique, there seems little doubt at all that the sedimentation rate remains the easier and quicker method of indicating tissue necrosis in these circumstances.

ELECTROPHORESIS OF THE URINE IN MULTIPLE MYELOMA.

MULTIPLE MYELOMA is one of those diseases which may be florid or cryptic, and in its cryptic state it may be extremely difficult to diagnose. Bence-Jones proteinuria is by no means a common accompaniment of the disease, particularly in its more cryptic form. Examination of smears of bone marrow usually reveals myeloma cells. With the advent of electrophoresis many reports appeared of abnormal serum proteins which could be regarded as highly suspicious of myeloma. Only a few reports have appeared of electrophoresis of urine in multiple myeloma. One such report is that of R. T. S. Jim.³ In a study of 35 patients with multiple myeloma he has demonstrated a high incidence of an abnormal globulin, of marked homogeneity, in the urine. This occurrence was not found in 83 other patients having proteinuria from other causes, save one patient with macroglobulinemia. Jim's paper shows that electrophoresis of the urine is of value in the diagnosis of multiple myeloma, and that where electrophoresis of serum is now carried out, the urine may well be tested in this way also.

MEASURING THE BLOOD PRESSURE.

A GOOD DEAL may hang on a blood pressure reading—in some cases more than can be clearly justified. The significance of a particular reading is, of course, often a matter of opinion, and there are standards by which we can be guided. The greatest confusion arises if the reading itself is unreliable, and we need to be sure of our technique. W. F. Nussle⁴ has made experiments upon 100 persons to determine what error might arise through applying the sphygmomanometer cuff too loosely in measuring the blood pressure. Readings were obtained with a clip-on cuff applied snugly, then again with the cuff loosened so that its circumference was extended by an inch and a quarter. Higher readings were obtained with the looser cuff, the average difference being 9.8 millimetres of mercury for the systolic and 11.5 millimetres for the diastolic pressure in heavy persons, and 5.4 millimetres for the systolic and 6.5 millimetres for the diastolic pressure in lean persons. It is suggested that the loose cuff gives higher readings because of the central ballooning of the bag, which then exerts the pressure of a too narrow cuff. Ideally the inflatable bag should be 20% wider than the diameter of the limb: narrower cuffs give "high" readings. The matter seems to warrant attention.

¹ *Acta med. scandinav.*, Vol. 156, 1957.

² *Blood*, January, 1957.

³ *Am. Heart J.*, December, 1956.

⁴ *Arch. Int. Med.*, November, 1948.

Abstracts from Medical Literature.

SURGERY.

Vascular Invasion in Carcinoma of the Colon and Rectum.

F. BURNS AND J. PFAFF (*Am. J. Surg.*, November, 1956) have studied 338 cases of colonic and rectal carcinoma and conclude that these cancers invade blood vessels with more frequency than has previously been reported. They state that a majority (74%) of patients with histologically evident vascular invasion of the tumour at the time of surgical excision of carcinoma ultimately show metastases. They state that a majority of patients with colonic and rectal carcinoma die primarily as a result of visceral metastases, whereas relatively few die of regional tumour extension, and approximately one-third die of non-associated complicating factors.

Major Reactions to Intravenous Urographic Media.

C. H. NICOLAI (*Arch. Surg.*, August, 1956) states that the intravenous injection of any iodine-containing compound is not without danger. He reports six serious reactions following intravenous pyelography, two of which terminated fatally. These reactions occurred in a series of 1200 urograms in which sodium acetrizate ("Urokon") was used. The author states that in 1954 Pendergraas reported 70 deaths in the literature, and to these have been added five other fatal reactions. Intravenous urography must be undertaken with due respect for its potential dangers. All patients should be screened for allergy. Cautious administration of the contrast medium is necessary, and emergency medication and surgical facilities must be readily available. The details of the six cases are given.

Leontiasis Ossea and Ostetitis Deformans.

E. D. D. DAVIS (*Brit. J. Surg.*, September, 1956) states that *leontiasis ossea* is a local fibrous dysplasia of the maxilla, which extends to the bones of the face, and after many years involves one or more of the long bones of the skeleton. The names *leontiasis ossea* and cherubism are purely clinical descriptions without any pathological basis. Cherubism is the label given to dysplasia of the jaws occurring in infants and children. The morbid anatomy and the normal blood chemistry are identical with early cases of *leontiasis ossea*. Cherubism may be familial and six or more cases have been recorded. *Leontiasis ossea* presents a smooth, round, hard, painless swelling or enlargement of the alveolus of the molar region of the maxilla. The swelling extends to the canine fossa, the nasal process, the roof of the orbit and the malar bone. Operations for the correction of the deformity are not performed until the age of twenty-one years, and not before full growth has been attained. The bony swelling cuts like an unripe pear. It is vascular, and small cysts about the size of a large pin's head may be seen. The predominant pathology of *leontiasis ossea*, as with

Paget's disease, is the replacement of bone by fibrous tissue, a dysplasia and excess of osteoid tissue which leads to the softening and loss of rigidity—hence the compensatory enlargement and deformity of the bones. The cause of this dysplasia is obscure and unknown, but it is assumed that the metabolism of the ossification and development of bone is defective. The deposition and absorption of calcium and phosphorus are disturbed. The reason for the increase of alkaline phosphatase in the blood serum and in the affected bone of Paget's disease is not understood, but it is known that phosphatase is associated with calcification and the formation of bone. The direct cause of Paget's disease is obscure, but more is known of the contributory or indirect cause. Hereditary disposition is difficult to establish, but there is evidence that a disposition is inherited. *Fragilitas osseum* with blue sclerotics is hereditary and familial. Traumatism is doubtful. Sepsis is not a cause, and the condition is not inflammatory. Infants and children under the age of six years with dysplasia of the jaws (so-called cherubism or early *leontiasis ossea*) improve if given daily doses of cod-liver or halibut-liver oil (vitamin D), additional milk (easily assimilated calcium), and carefully regulated sunlight treatment. Progress is observed by radiography before and six months after treatment, and biopsy with strict asepsis when practicable is of value.

Spasm of the Common Bile Duct Producing Pain After Sphincterotomy.

W. WALTERS (*Arch. Surg.*, October, 1956) discusses the problem presented by the patient who after cholecystectomy continues to have attacks of pain in the right upper quadrant of the abdomen which simulate biliary colic. He states that this problem has been solved by neither sphincterotomy nor choledochenterostomy. He reports two cases in which two to three months after sphincterotomy and T-tube drainage of the common duct X-ray studies of the biliary tree showed spasm of the wall of the common duct with increase of the intraduct pressure. This spasm was associated with severe attacks of right upper abdominal pain. Glyceryl trinitrate relieved the spasm, causing the intraductal pressure to fall; so that the radio-opaque substance which was being used in these studies entered the duodenum, and the pain was relieved. The author also found that at the height of the attack, with high intraduct pressures, immediate relief of the severe pain was accomplished in one case by an injection of piperocaine hydrochloride into the left splanchnic nerve area. It was interesting to note that this pain was relieved though the ductal pressure was still high and the duct was still in spasms as seen radiologically. The pain did not reappear even though the intraduct pressure was increased by an additional injection of the thorium dioxide used in the radioscopic studies. In this case injections were not made in the region of the right splanchnic nerve. The author states that this study indicates that following sphincterotomy, spasm of the common bile duct can occur and cause attacks of

pain which resemble biliary colic. This pain can be relieved by blocking the left splanchnic nerves with a local anaesthetic even though spasm of the duct continues and intraduct pressure remains high. In one case an alcoholic block of the right splanchnic nerve was followed by complete relief of attacks of right upper abdominal pain for five months. When the pain returned, it was more on the left side. It was relieved for five months by alcoholic block of the left splanchnic nerve. It is clear, therefore, that after sphincterotomy, although the attacks of pain diminish, they can still recur.

Hypofibrinogenemia in Surgical Patients.

L. PHILLIPS, P. ROWLEY AND D. HABIB (*Surg., Gynec. & Obst.*, October, 1956) state that a group of nine surgical patients who were suffering from severe hemorrhage and hypofibrinogenemia demonstrate that fibrinolysis or fibrinogenolysis was present in many of those cases. These patients represented a wide variety of operations, which would seem to indicate that hypofibrinogenemia can occur in almost any operative procedure. They state, as a result of their studies, that early diagnosis, prompt intravenous administration of fibrinogen, and maintenance of vital activities with adequate, though not excessive, blood replacement, generally result in eventual recovery of the patient. Delay or failure to give fibrinogen to such patients results in death despite large and massive transfusions. However, the indiscriminate use of fibrinogen should be avoided because of the danger of homologous serum jaundice accompanying transfusion of a blood fraction. Fibrinogen levels of from 125 to 175 milligrammes per 100 millilitres of plasma, as well as the lower ones obtained with obstetric patients, may be an indication for the need of fibrinogen in these surgical cases. The authors also suggest that fibrinogen levels should be followed at frequent intervals until hemostasis is established, in order to assure that adequate quantities have been given.

A Clinical and Pathological Study of Endometriosis of the Lung.

R. LATTES, F. SHEPARD, H. TOVELL AND R. WYLIE (*Surg., Gynec. & Obst.*, November, 1956) report a case of endometriosis of the lung. It occurred in a thirty-four-year-old woman who for about three years had episodes of hæmoptysis associated with her menstrual periods. These hæmoptyses started after Caesarean section and an endometrial curettage for menorrhagia, and continued irregularly in spite of various hormonal treatments until she again became pregnant. At that time chest X-ray examination, which had never before shown any lesion, showed a discrete coin lesion in the middle lobe of the right lung. Exploratory thoracotomy followed by segmental resection of the lung showed that the mass consisted of endometrium with marked decidual reaction of the stroma. The authors consider that it was this decidual reaction which caused the previously present functioning endometrial implant to enlarge and so become detectable by X rays. The patient had since been delivered

at term by Caesarean section and no further hemoptyses occurred. The authors suggest that this implant of viable endometrium was transported by the blood-stream at the time of her previous uterine operations.

Biopsy of the Breast followed by Delayed Radical Mastectomy.

E. PIERCE, O. CLAGETT, J. McDONALD AND R. GAGE (*Surg., Gynec. & Obst.*, November, 1956) state that among 650 patients who underwent mastectomy at the Mayo Clinic during 1947 and 1948, there were 104 who had undergone biopsy at an appreciable interval prior to the mastectomy. Of these biopsies, 39 were incisional, one was a punch biopsy, one was a needle biopsy, and the remaining 55 were excisional. Definitive surgical treatment was performed in two weeks or less in 76% and in six months or less in 89.6%. Adenocarcinoma occurred in 83 of the patients, 10 had comedocarcinoma and three had Paget's disease. Axillary nodal metastasis had occurred in 44.8% of the patients at the time of operation. The over-all five-year survival rate was 61.1% for the biopsy group, and 60.1% for a control group of 554 patients who underwent radical mastectomy without prior biopsy before the operation was performed. The significant point of this study is that the five-year survival rate is only 47.5% for the patients who had excisional biopsy. A rather surprising finding was that 65.1% of patients delaying definitive treatment up to six months were alive five or more years after mastectomy.

Omphalomesenteric Duct Anomalies.

T. MOORE (*Surg., Gynec. & Obst.*, November, 1956) reports 46 symptomatic cases of incomplete omphalomesenteric duct obliteration. Malformation consisted of persistent omphalomesenteric duct in ten cases, a diverticulum attached to the umbilicus by a fibrous cord in five cases and a Meckel's diverticulum in 31. The author states that Meckel's diverticulum occurs with equal frequency in both sexes, but there is a significant male preponderance in symptomatic cases, especially in those in which there is gastric mucosa in the diverticulum. The ages of the patients vary widely, but 78% were 15 years of age or younger and one-third were in the first year of life. Intestinal obstruction, abdominal pain and melena with anaemia were the most frequently encountered major symptoms. Intussusception of ileum on to the abdominal wall through a persistent omphalomesenteric duct was encountered in five cases. Of these five infants, four survived. A diverticulum, attached to the umbilicus by a fibrous cord, was the cause of intestinal obstruction in four cases and the site of an acute diverticulitis in one case. In one case the diverticulum arose from the side of the appendix. All five of these patients recovered. A Meckel's diverticulum was the site of pathological change in the form of diverticulitis in 12 cases, with melena and anaemia in ten cases, and acted as the leading point for an intussusception in six cases. A perforated peptic ulcer was found in three of these cases. All of these 28 patients recovered. In three

cases, adherence of a Meckel's diverticulum to an adjacent structure, other than the umbilicus, formed a ring for an internal hernia. Gangrene of the incarcerated loop of intestine occurred in two of the three patients. All of these three patients died, only one being operated upon. The author emphasizes the serious character of this type of obstruction produced by a Meckel's diverticulum. Of these patients, 44 were operated upon and all but three recovered. Of the three deaths, two were due principally to additional congenital abnormalities.

The Effect of Large Calibre Splints on Ureteral Healing.

R. WEAVER (*Surg., Gynec. & Obst.*, November, 1956) points out that splinting catheters which stretch the ureter have been observed both experimentally and clinically to produce severe stricture formation. Small splinting catheters on the other hand did not cause stricture formation in either the laboratory animal or the clinical patient. Stricture formation is due to periureteral fibrosis probably resulting from intraureteral and intrarenal infection, which produces urinary stasis. The author points out that with the use of smaller sized splints the regenerated or incised area will not contract, but will retain an adequate lumen.

Evaluation of Operative Procedures for Achalasia.

MCH. S. BREWER, W. BARNES AND S. REDO (*Ann. Surg.*, November, 1956) conducted a series of follow-up studies on patients who had had various operations for achalasia of the oesophagus. Late follow-up studies of patients with achalasia treated by procedures at the oesophago-gastric junction that permit reflux of gastric contents showed generally poor results. These procedures included the Heineke-Mikulicz cardioplasty, a Hegrovsky-Grondahl cardioplasty, resection of the lower part of the oesophagus and adjacent part of the stomach with oesophago-gastrostomy, resection of the oesophago-gastric junction with oesophago-jejunostomy in Roux-Y fashion and preservation of most of the stomach. The poor results were due to the advent of oesophagitis with ulceration and/or stricture formation in at least 73% of these cases. Thirteen patients underwent a Heller myotomy procedure for achalasia. The results were good in nine, fair in one, poor in two and undetermined in another. The authors conclude that the Heller procedure for this lesion has thus far proved to be the most satisfactory surgical method for dealing with uncomplicated achalasia. Stenosing lesions at the oesophago-gastric junction, either primary or resulting from previous operations, may be treated satisfactorily by oesophago-jejunostomy in Roux-Y fashion with retention of part or all of the stomach.

Bladder Substitution with Isolated Ileal Segments.

N. W. WAWRO (*Ann. Surg.*, November, 1956) reports his experience with 22 patients for whom he provided an ileal bladder. Twenty of the patients had had pelvic exenteration for cancer,

one had a vesico-vaginal fistula due to carcinoma of the cervix and one had hemorrhagic cystitis. The uterers were anastomosed to an isolated segment of ileum, which discharged on the abdominal wall in the right iliac fossa. A description of the full technique is given. Three of the patients had post-operative pyelitis, but there was no incidence of hyperchloremic acidosis over a four-year follow-up period. In these patients, all partly and completely obstructed kidneys improved after relief of obstruction and establishment of free urinary flow. The author believes that uretero-ileostomy should be considered as an effective method of urinary diversion and substitution for the bladder in the presence of neoplastic, congenital or traumatic lesions of the bladder.

Subcutaneous Phlebitis of the Breast and Chest Wall.

P. KAUFMAN (*Ann. Surg.*, November, 1957) discusses seven cases of subcutaneous thrombophlebitis involving the veins of the breast and chest wall. He states that this is a completely benign lesion and must be kept in mind to avoid confusion with lymphangitic carcinomatous spread. The process is self-limiting, and no special therapy is required.

Extended Colotomy Incisions for Intraluminal Examination of the Colon.

R. GANTS, B. RAYMOND AND J. POPE (*Ann. Surg.*, November, 1956) recommend the use of extended colotomy incisions in instances where endoscopy, transillumination and palpation of the colon prove unsatisfactory. They state that this method can be accomplished without complications, provided that the bowel is adequately prepared before operation. They have used this technique of extended colotomy successfully in ten patients. Should the portion of bowel opened have a pathological lesion present, then this portion may be resected. However, if no abnormality is found, the incision is closed in the line of the bowel with particular suture. These observations are supported by experimental observation on the colon of monkeys.

Right Hepatic Lobectomy for Primary Carcinoma of the Liver.

C. FINEBERG, W. GOLDBURGH AND J. TEMPLETON (*Ann. Surg.*, November, 1956) discuss a successful case of right hepatic lobectomy for primary hepatoma. They urge a more aggressive attitude towards primary hepatic tumours, but point out the difficulty of diagnosing these tumours without early laparotomy. The authors' patient, fifteen months after the operation, had a metastatic carcinoma of a similar histological pattern in the left lobe of the liver. However, two months later she was still alive and well and carrying on her usual activities. Consequently the authors consider that in all cases of hepatoma of the liver treatment should be by resection whenever possible.

British Medical Association News.

ANNUAL MEETING.

The annual meeting of the Western Australian Branch of the British Medical Association was held at Cygnet Hall, Crawley, on March 16, 1957, the President, Dr. Leigh Cook, in the chair.

RETIRING PRESIDENT'S ADDRESS.

Dr. Leigh Cook delivered his retiring president's address (see page 709).

INDUCTION OF PRESIDENT.

Dr. Leigh Cook introduced the incoming President, Dr. A. A. Merritt, and vacated the chair in his favour.

ANNUAL REPORT OF COUNCIL.

The annual report of the Council for the year ending March 16, 1957, was adopted. The report is as follows.

The President and members of the Council of the British Medical Association (Western Australian Branch) have much pleasure in presenting the fifty-eighth annual report of the Branch for the year ending March 16, 1957.

Membership.

The membership of the Branch has increased during the twelve months ended December 31, 1956, by a net amount of 36 as follows:

Membership at December 31, 1955	578
Losses:	
Transferred to other branches	24
Resignations	9
Terminated—unfinancial	3
Deceased	8
	44
	534
Gains:	
Transferred from other branches	57
Elections	23
	80
Membership at December 31, 1956	614

Obituary.

With deep regret we record the deaths of the following members which occurred during the year: Dr. B. O. Bladen, Dr. F. W. Carter, Dr. H. J. Gray, Dr. E. Herz, Dr. A. A. Hill, Dr. J. D. Palandri, Dr. A. E. Stenning and Dr. C. I. Streich. The sincere sympathy of the Branch is extended to the families of these late members.

The Branch Council recorded the following resolutions regarding the services to the Association of the late Dr. B. O. Bladen and Dr. F. W. Carter:

The late Dr. B. O. Bladen: That Branch Council expresses its deep regret at the death of Dr. Bryant Oswald Bladen. It places on record its appreciation of the valuable services rendered by him to the Branch Council and to the profession and tenders its profound sympathy to his family in their bereavement.

The late Dr. F. W. Carter: That Branch Council place on record its deep appreciation of the constant and unremitting work of the late Dr. Fred Carter on behalf of the medical profession. These efforts were often made at great sacrifice of time, energy and personal finance. He was elected to Branch Council in March, 1935, and served continuously thereafter until his death in December of last year. He became President of the Western Australian Branch in 1937.

Congratulations.

Congratulations were extended to Dr. J. G. Hunter, C.M.G., General Secretary of the Association in Australia, Dr. H. J. C. Hanrahan, O.B.E., the Convocation Group representative for the Lower Great Southern, and Mr. J. Griffith, O.B.E., Administrator of the Royal Perth Hospital, on the honours conferred upon them by Her Majesty the Queen, and to Dr. H. B. Gill and Dr. E. S. Humphry on completing on December 31, 1956, fifty years' continuous membership of the Association.

Meetings.

In addition to the annual meeting, one special meeting to discuss building and six general meetings of the Branch were held. The subjects of these meetings were as follows:

April: Symposium by dermatologists.

May: "Anemia in General Practice", Sir Lionel Whitby.

June: "Anxiety", Dr. A. Sinclair.

July: "A Physician's Experience in Psychosomatic Disease", Dr. J. H. Sheldon.

August: Symposium by radiologists.

October: "Some Aspects of Sterility", Professor A. M. Claye.

Council Meetings.

Twelve meetings (including one special meeting) of the Branch Council were held. The record of attendance is as follows:

Dr. H. L. Cook (President)	10
Dr. C. W. Anderson (Honorary Secretary and Federal Councillor)	12
Dr. A. R. Bean (Councillor)	10
Dr. B. O. Bladen (Councillor)	4
Dr. B. W. Buttsworth (Past President)	9
Dr. D. M. Clement (Federal Councillor)	12
Dr. M. Connaughton (Councillor)	10
Dr. D. E. Copping (Councillor)	12
Dr. A. L. Dawkins (Chairman of Convocation)	10
Dr. D. W. Fleming (Councillor)	7
Dr. L. I. Hensell (Commissioner of Public Health)	6
Dr. A. Johnson (Commonwealth Director of Health)	10
Dr. D. D. Keall (Honorary Treasurer)	11
Dr. R. L. Leedman (Assistant Honorary Secretary)	12
Dr. A. A. Merritt (Vice-President)	12
Dr. R. S. W. Thomas (Councillor)	12

Office-Bearers and Councillors.

The following members have been elected as office-bearers for 1957:

President: Dr. A. A. Merritt.

Vice-President: Dr. C. W. Anderson.

Honorary Secretary: Dr. R. L. Leedman.

Honorary Treasurer: Dr. D. D. Keall.

Honorary Assistant Secretary: Dr. F. Macaulay.

Chairman of Convocation: Dr. B. W. Buttsworth.

Federal councillors elected for 1957: Dr. C. W. Anderson and Dr. D. M. Clement.

The following members have been elected as the five ordinary members of Council for 1957: Dr. A. A. Barr, Dr. A. R. Bean, Dr. D. E. Copping, Dr. A. L. Dawkins, Dr. A. G. Murray.

It is desired to express, on behalf of the Branch, the warmest appreciation of the work done by the retiring councillors.

Federal Council.

Dr. C. W. Anderson and Dr. D. M. Clement were the representatives of the Branch on the Federal Council and attended two meetings of the Federal Council during the year, full proceedings of which were recorded in THE MEDICAL JOURNAL OF AUSTRALIA of April 14 and October 6, 1956. The Branch Council wishes to record its deep appreciation of the work performed by these members on behalf of the Branch.

Library Committee.

The library was handed over to the control of the University of Western Australia on November 15, 1956. The general activities of the Library Committee will be the subject of a separate report.

Representation.

The Branch was represented at various meetings and conferences during the past year as follows:

Council of the British Medical Association: Dr. Miles Formby.

Federal Council of the British Medical Association in Australia: Dr. C. W. Anderson, Dr. D. M. Clement.

* Deceased October 14, 1956.

* Dr. W. S. Davidson deputized for Dr. L. I. Hensell on five occasions.

University Advisory Board in Medicine: Dr. H. H. Stewart.**Interim Faculty of Medicine:** Dr. Leigh Cook.**Australasian Medical Publishing Company Limited:** Dr. C. W. Anderson, Dr. F. W. Carter (deceased), Dr. Leigh Cook, Dr. R. L. Leedman.**"The Medical Journal of Australia" (Editor's representative in Western Australia):** Dr. R. L. Leedman (resigned November, 1956), Dr. Leigh Cook.**State Health Council:** Dr. D. M. Clement, Dr. Leigh Cook, Dr. J. A. Love, Dr. H. K. Pawsey, Dr. N. H. Robinson, Dr. I. S. Wallman, Dr. A. B. Webster, Dr. M. F. Williams.**Health Education Council:** Dr. D. E. Copping.**Nurses' Registration Board:** Dr. R. H. Nattrass and Dr. L. E. Le Souef.**Silver Chain Association:** Dr. C. W. Anderson.**Dental Board:** Dr. I. O. Thorburn (Dr. R. J. Cato appointed during absence of Dr. Thorburn overseas).**College of Dental Science:** Dr. H. E. H. Ferguson.**Joint Committee with Underwriters' Association:** Dr. Leigh Cook, Dr. H. M. Hill, Dr. G. B. Maitland.**Saint John Ambulance Association:** Dr. A. L. Dawkins.**Optometrists' Registration Board:** Dr. D. D. Paton.**Sex Education (Parents and Citizens' Association):** Dr. I. O. Thorburn.**Protection of Practices:** Dr. F. W. Carter (deceased), Dr. L. A. Hayward, Dr. H. H. Stewart.**Medical Services Committee of Inquiry:** Dr. C. W. Anderson, Dr. F. W. Carter (deceased), Dr. D. M. Clement, Dr. Leigh Cook, Dr. H. J. Gray (deceased), Dr. H. H. Stewart.**Anti-Cancer Council of Western Australia:** Dr. J. G. Hislop.**Western Australia Council of Social Services:** Dr. C. W. Anderson.**British Medical Agency Company:** Dr. J. P. Ainslie, Dr. C. W. Anderson, Dr. A. L. Dawkins, Dr. R. D. McK. Hall, Dr. D. D. Keall, Dr. H. Macmillan, Dr. A. T. Pearson, Dr. G. S. Pestell, Dr. J. H. Stubbe.**Medical Library of Western Australia:** Dr. E. R. Beech, Dr. D. M. Clement, Dr. N. H. Robinson.**Committees.**

The following are the members of standing subcommittees appointed by the Branch Council:

Library (ceased to operate on November 15, 1956): E. R. Beech (Convener), A. A. Barr, G. A. Kelsall, R. B. Lefroy, N. H. Robinson.

Publicity: H. L. Cook (Convener), C. W. Anderson, B. W. Buttsworth, A. A. Merritt.

Medico-Legal: The President (Convener), A. A. Barr, B. A. Hunt.

Medico-Pharmaceutical: The President (Convener), A. A. Barr, B. C. Cohen, L. I. Henzell.

Ethics: The President (Convener), the Honorary Secretary, J. P. Ainslie, A. L. Dawkins, J. L. Day, L. E. Le Souef, A. A. Merritt.

Fees Advisory: J. L. Day, R. L. Leedman, H. Macmillan, H. Stewart, A. B. Wilson.

Committee to Confer with Benefit Organizations: H. L. Cook (Convener), C. W. Anderson, D. M. Clement, D. E. Copping, A. Johnson.

Building: D. E. Copping (Convener), B. C. Cohen, A. L. Dawkins, D. D. Keall, R. L. Leedman, A. A. Merritt, H. C. Pope, J. H. Stubbe.

Drunken Driving: A. R. Bean (Convener), C. W. Anderson, B. C. Cohen, R. B. Lefroy, A. T. Pearson.

Social Relations: B. W. Buttsworth (Convener), P. W. Atkins, H. S. Cohen, A. L. Dawkins, F. Macaulay.

Post-Graduate: D. M. Clement, M. G. F. Donnan, J. G. Hislop, B. A. Hunt.

Hospital Policy: N. H. Robinson (Convener), A. R. Bean, H. C. Callagher, D. M. Clement, A. L. Dawkins, J. L. Day, D. W. Fleming, C. Fortune, L. I. Henzell, D. D. Keall, R. L. Leedman, L. E. Le Souef, A. A. Merritt, H. H. Stewart, J. R. H. Watson.

Public Health.

We wish to take this opportunity of thanking Dr. Linley Henzell, Commissioner of Public Health, Dr. W. S. Davidson, Deputy Commissioner of Public Health, and Dr. A. Johnson, Commonwealth Director of Health, for their valuable cooperation and assistance during the year.

Amendment of By-Laws.

The following amendments to the by-laws of the Branch were made during the year:

By-law 20. Add: Nor shall any member (even to his bona fide patients) advertise whether directly or indirectly for the purpose of obtaining patients or promoting his own or his partner's or his assistant's professional advantage or procure or sanction or acquiesce in the publication of notices commending or drawing attention to his professional skill, knowledge, services or qualifications, or be associated with or employed by those who procure or sanction such advertisement or publication.

New by-law 5. (d). Undergraduates in medicine of the University of Western Australia in the fifth and sixth years of their course shall be eligible to be enrolled as Honorary Student Associates of the Branch without subscription, with a right to attend meetings of the Branch, but without the right of speaking or voting.

The latter amendment will be submitted to the next general meeting of the Branch.

Contract Practice.

Owing to the fact that no lodge agreements are now in existence, and only a small number of individual agreements with some country medical funds, Branch Council decided not to reappoint this committee. Any contract practice questions are now dealt with direct by the Executive Committee.

Post-Graduate.

Post-graduate activities will be the subject of a separate report.

Social.

Medico-Legal Golf.—The annual golf match between the Law Society and this Branch was held at Royal Perth Golf Club on Wednesday, October 12, 1956, and was voted most successful by all those who attended the golf and dinner which followed. For the first time for some years, the number of medicos (35) exceeded the number of legal men who took part in the tournament. The foursomes trophy resulted in a tie, Messrs. P. Connaughton and W. Elphick and Dr. H. Macmillan and Dr. A. Frazer returning a score of six up from bogey. The B.M.A.C. trophy was won by the honorary organizer, Dr. H. W. Illingworth (two up). It is to be hoped that our numbers will be maintained or increased this year, the date of the fixture being the second Wednesday, October 9, 1957.

Cocktail Party.—The cocktail party held at Cygnet Hall on December 15, 1956, appears to have been most successful, and will be maintained as an annual function.

Entertainment by Branch Council.—Branch Council entertained the Federal Minister for Health, Dr. D. A. Cameron, and the Director-General of Health, Dr. A. J. Metcalfe, at a buffet luncheon. Dr. Mervyn Archdall, Editor of THE MEDICAL JOURNAL OF AUSTRALIA, also visited Western Australia during the year and attended a meeting of the Executive Committee.

Convocation.

Only one meeting of convocation was held during the year; the meeting proposed for March 17, 1957, was cancelled, it being the opinion of Branch Council that there were not sufficient items of importance or of a policy nature warranting its being called together.

Special Groups for the Study of Special Branches of Medical Knowledge.

Branch Council, at its October, 1956, meeting, approved of the formation of the Western Australian Branch of the Rheumatism Association of Australia.

State Health Council.

The State Health Council, under the chairmanship of the Commissioner of Public Health, has two subcommittees: (i) the Hospital Policy Committee, (ii) Maternal and Infant Health Committee. Both these committees meet under the chairmanship of the Commissioner of Public Health. The British Medical Association (Western Australian Branch) is represented on the Council and on its two subcommittees.

The State Health Council met twice in 1956 (March and July) to consider recommendations made by its sub-committees. Of the business done during the year, the most contentious was the siting of the new Alexandra Home for Women and the siting of the proposed Rehabilitation Hospital. The Alexandra Home for Women is now sited in the vicinity of the Collier pine plantation, and the decision to do this was a departmental one and in direct opposition to the recommendation of the Hospital Policy Committee and against the advice of the State Health Council. The debate on the siting of the new Rehabilitation Hospital was long and involved, and so far, it is understood, no final decision has been reached. Of the two sites proposed, it has been recommended that the present site of the infectious diseases block annexe of the Royal Perth Hospital be used. If this site is to be used to its best advantage, a further seventeen acres will be required, which are at present University endowment lands.

The main recommendations put forward by the Maternal and Infant Health Committee, and approved by the State Health Council, are: (i) Puerperal pyrexia as defined by the Royal College of Obstetricians and Gynaecologists be accepted. (ii) Routine estimation of Rh antibodies should be a charge against the State when done at the laboratory of King Edward Memorial Hospital and where the woman concerned passes the means test. (iii) Eclampsia be proclaimed a notifiable disease. Late in 1956 a deputation from the Branch met the Minister for Health, and he agreed that a representative of the Australian Association of Psychiatrists (Western Australian Branch) should be invited to take a seat on the Council.

Health Education Council.

Early in 1956 the Department of Public Health sponsored the formation of a Health Education Council, and the Minister for Health called together representatives of trade, industry, commerce, local government, the Press, broadcasting, women's interests, university, medical profession *et cetera*. The Health Education Council was formed with a small full-time staff and a budget of some £12,000, exclusive of salaries. During the year the Council's activities have been devoted in part to planning a long-term programme of health education for the community and in part to active publicity on such matters of immediate concern as the Salk campaign, home accidents and the control of the house fly. Much of what has appeared in the daily Press on these and other subjects as ordinary Press items or special features has had its origin in the Health Education Council. It is likely that most of the work of this Education Council will not be recognized as such by the public, because its publicity and ideas will find expression through cooperation with the Press, broadcasters, Education Department, Parents and Citizens' Organization *et cetera*. The British Medical Association Council is represented.

Financial Classification of In-Patients.

This matter has been under active consideration by the Hospital Policy Committee in conjunction with the honorary medical staffs. A special meeting of the Branch Council was held on May 16, 1956, to consider recommendations made by the Hospital Policy Committee. The Branch Council decided to advise the Premier of Western Australia that the Association had been requested by the honorary medical staffs to take up the question of financial classification of in-patients which had been previously discussed with him by a deputation from the Royal Perth Hospital in 1954. The Premier was asked whether he had reached any decision in regard to that deputation, and advised that the Association was prepared to meet him and let him have any further information he might require in order to reach a decision. No reply has been received from the Premier to letters which were written some months ago. In spite of the fact that further information has still not been received from some honorary medical staffs on certain policy matters which have not been finalized, the matter has been pressed with the Premier.

Workers' Compensation Act.

On October 30, 1956, a Bill for an Act to amend the *Workers' Compensation Act* was introduced in the Legislative Assembly. The report of these proceedings in the Press the following day was the first intimation this Branch had of some of the proposed amendments which were of direct concern to the medical profession. The Government proposed to remove the limitation on medical and hospital fees, and, as a method of policing the charges, make the present voluntary Joint Committee a statutory body. Another amendment proposed was to make it obligatory on the instructions of an employer for an injured worker to obtain treatment from a specialist, a further provision being

that where the injured worker refused to obtain such treatment, his right to weekly payments would be suspended. The Branch Council agreed that the proposal to withdraw the limit of £100 on medical expenses would remove an injustice under which the profession had suffered, but strongly opposed the proposal that the Joint Committee become a statutory body, with all the legalities and governmental control which would be involved. A further point to which the Branch Council took exception was the clause that the present scale of charges agreed upon between this Branch and the Underwriters' Association could only be amended by agreement between the two bodies. This meant, of course, that if the underwriters refused to agree, the present scale of charges could never be altered. So far as the proposal that a worker should, when directed, obtain specialist treatment, the Branch Council was opposed to this on principle as another interference between patient and doctor. After many interviews and much correspondence, the Government finally accepted the Branch Council's objection to the Joint Committee becoming a statutory body, and the Minister verbally agreed with the viewpoint put forward that the direction of the worker to obtain specialist treatment was not desirable. However, in the final discussions in Parliament, the proposal to remove the limitation of £100 was lost, and the clause requiring the worker to obtain specialist treatment was amended to provide that a worker would only be so required where, in the opinion of a specialist, after a clinical examination and/or examination of X-ray plates, specialist treatment was necessary.

Drunken Driving.

At the Federal Council and locally the question of blood alcohol tests for persons accused of drunken driving has been under active consideration. The Federal Council and the National Safety Council of Australia are examining the question on the basis of voluntary tests, while in Western Australia the joint committee appointed by the Law Society and this Branch reached agreement on a number of aspects of the problem, namely, that blood alcohol and urine alcohol tests should be used, such tests to be compulsory; that the figure of 0.1% blood alcohol would be a reasonable one on which to base a charge; that if the blood of a defendant should contain 0.05% or less the person should be exonerated; and that the present offence of drunken driving should be replaced, the offence to be driving, or attempting to drive, with a specified amount of alcohol in the blood. The legal members of the joint committee undertook to submit the above agreement to the Law Society for consideration. When further advice is received from the Law Society, the matter will be again considered by the Branch Council, and recommendation will be submitted to Convocation.

Ethics.

During this year there have been many more ethical complaints between doctor and doctor, and many more cases referred to the Fees Advisory Committee than in former years. There have also been cases of advertising both directly and indirectly. The Council is most perturbed at this trend and has tried to ascertain why the conduct of the medical profession has deteriorated to such an extent that these breaches are becoming more frequent.

The impact of the *National Health Act* has led to loose certification in some cases and a tendency to itemize unduly accounts referred to patients. The Council would be loath to see an excellent scheme jeopardized by these methods.

Concerning the ethical complaints, these have been of two sorts: disputes between group practices and disputes between specialists and general practitioners. Perhaps with the advent of group practices, business instincts of groups have been roused, and they feel that the larger groups must justify their existence by increasing the number of clients. With regard to the disputes between specialists and general practitioners, the ethical rules have not always been observed by either side. There is a code of ethics which is at present being revised, but until such revising is completed they must stand as they are. It is the duty of every member to make himself acquainted with that code and to observe it scrupulously.

The bickering between sections of the profession can only lead to disunity in its ranks. Unity of the profession in the past has been the rock on which the waves of socialization of medicine have been broken.

Some members of Council have felt that there was a lack of disciplinary power within the Branch constitution, and it has been suggested that one solution would be to allow "M.B.M.A." on name plates to signify that the practitioner is a member of the British Medical Association.

BRITISH MEDICAL ASSOCIATION (WESTERN AUSTRALIAN BRANCH).
Statement of Income and Expenditure during Twelve Months Ended December 31, 1956.

INCOME.				EXPENDITURE.						
	£	s.	d.	£	s.	d.	£	s.	d.	
By Members Subscriptions				7,729	11	6	To Subscriptions to:			
„ Interest:							(a) Members' Journals—			
(a) Commonwealth Bonds	51	10	3				(i) Aust. Med. Pub. Co. Ltd.	593	10	0
(b) Aust. Med. Pub. Co. Ltd.:							Less Series "E" Debentures	296	15	0
(i) Debentures Series "A"—	17	5	0						296	15
„ "D"	64	7	9				(ii) B.M.A., London		934	15
(ii) Debentures Series "E"				133	3	0				
„ British Medical Agency Company							(b) Federal Council, Sydney		1,231	10
Revenue Account				1,507	1	7	(c) Medical Benevolent Association		722	10
							tion		558	1
							(d) Flying Doctor Service		1	1
							(e) Historical Society of Western			
							Australia		12	6
							(f) Western Australian Council			
							of Social Services		1	1
									2,514	16
							„ Cost of Administration:			
							Audit Fees	42	0	0
							Car Expenses—Secretary	55	1	9
							Depreciation	49	1	10
							Duplicating	32	19	5
							General Expenses	102	7	11
							Legal Expenses	5	5	0
							Library Expenses	340	2	3
							Medico-Political Expenses	57	1	0
							Postages and Petty Cash	277	19	2
							Printing Expenses	49	14	4
							Salaries:			
							Secretary	1,744	8	9
							Typists	804	18	10
							Librarians	949	19	0
							Clerical Assistant	8	10	0
								3,507	16	7
							Less salaries			
							recouped	81	15	0
								3,426	1	7
							Stationery	39	8	7
							Superannuation—Secretary	225	0	0
							Telephone	97	14	8
								4,849	17	6
									7,364	13
							„ Excess of Income over Expenditure		2,005	2
									£9,369	16

St. John of God Hospital, Subiaco: Storage of Blood.

Negotiations for the establishment of a regional blood depot at St. John of God Hospital, Subiaco, have been proceeding for some months. There were a number of features on which agreement could not be reached, and the Branch Council has now been advised by the Blood Transfusion Committee that they do not consider that any immediate success will be achieved by further negotiations.

Liaison with the Press.

Although a very clear understanding was entered into between the *West Australian* newspaper group and the Branch that Press statements issued by the Association would be published without alteration, or would be checked back with the Branch office if any alterations were desired to be made, there have been a number of unfortunate items which appeared in the Press in breach of this agreement. After further discussions between members of the Publicity Committee and the management of the *West Australian*, each newspaper has appointed a medical correspondent who will be used by the newspaper in all contacts with the Branch. It is hoped by these means that liaison in the future will be much more satisfactory.

British Medical Agency Company.

The British Medical Agency Company completed another successful year and again increased its contribution to the income of the Branch. The support from members could be greater, and all members are requested to use the facilities of the British Medical Agency Company to their own and the Association's advantage.

Staff.

The Council wishes to express to the office and library staffs its sincere thanks for their cooperation during the year.

THE MEDICAL BENEVOLENT ASSOCIATION OF WESTERN AUSTRALIA.

Dr. J. L. Day presented the annual report of the Medical Benevolent Association of Western Australia, which was adopted. The report is as follows.

The committee of the above Association has pleasure in presenting a statement indicating the receipts and disposal of funds for the year ended December 31, 1956.

Income was derived from subscriptions through the British Medical Association (£597 9s.) and from interest on Commonwealth loans (£54).

Expenditure was in the nature of benevolent contributions to widows and doctors in necessitous circumstances and totalled £622 7s. 10d.

Funds invested in Commonwealth Treasury bonds remain the same at £1700, which together with a credit bank balance of £839 0s. 5d. makes total funds of the Association £2539 0s. 5d.

The committee expresses its sincere appreciation of the continued support of your Association.

J. L. DAY.

REPORT OF LIBRARY COMMITTEE.

Dr. E. R. Beech presented a report on behalf of the Library Committee and of the three representatives of the Association on the Committee of the Medical Library of Western Australia, which took over the control of the library on November 15, 1956. The report, which was adopted, is as follows.

We beg to submit to you a report concerning the work of the committee of the British Medical Association Library until November, 1956, and your three representatives on the Committee of the Medical Library of Western Australia subsequent to that date.

BRITISH MEDICAL ASSOCIATION (WESTERN AUSTRALIAN BRANCH).

Statements of Assets and Liabilities at December 31, 1956.

ASSETS.			LIABILITIES.		
	£	s. d.		£	s. d.
Subscriptions in Arrears		183 15 0	Subscriptions in Advance		33 12 0
Sundry Funds Overdrawn—Cocktail Party, 1956		148 17 1	Sundry Funds in Credit:		
Investments:			British Medical Association		
(a) Aust. Med. Pub. Co. Ltd.—			House—Members' Loan Ac-		
(i) Debentures "A"—"D"	345	0 0	count	12,427	3 0
(ii) Debentures "E"	2,014	5 0	Building Fund	1,565	4 0
			Car Badge Account	19	4 11
			Entertainment Fund	18	3 0
			Library Donations	27	11 2
(b) Commonwealth Treasury			Cyril Bryan Fund	188	8 1
Bonds	1,410	0 0	Harry Lucraft Fund	22	1 0
(c) British Medical Agency Com-			Clinical Research Unit Grant	656	6 6
pany Shares	9	0 0	Medico-Legal Golf	11	12 2
			Nelson Bequest	17	7 1
Cash at Bank of New South Wales		3,778 5 0	Post-Graduate Committee	138	17 6
Fixed Assets:			Post-Graduate Grant	370	0 1
British Medical Agency Company-			Publicity Fund	75	5 4
British Medical Association					15,537 3 10
House Loan Account	15,448	9 7	Accumulated Reserve Account:		
Furniture and fittings at January			Balance at January 1, 1956	6,857	5 2
1, 1956	£981	16 4	Add Excess of income over ex-		
Less Depreciation	£49	1 10	penditure	2,005	2 4
		932 14 6			8,862 7 6
		16,381 4 1			
		£24,433 3 4			£24,433 3 4

We report that we have audited the accounts of the British Medical Association (Western Australian Branch) for the year ended December 31, 1956. In our opinion the accompanying balance sheet is properly drawn up and exhibits a true and correct view of the state of the Association's affairs as at December 31, 1956, and the attached income and expenditure account is also properly drawn up and exhibits a true and correct view of the Association's affairs for the year. Both are in accord with the best of the information and explanations given to us, and as shown by the books of the Association.

(Signed) STOWE AND STOWE,
Auditors.

The British Medical Library Committee met on eight occasions during the year, monthly reports being sent to the Council.

During the period March 12 to November 15 last year the library received 2630 requests for information, both personally or by letters and telephone; 456 books were borrowed and 2353 journals; 130 new books were added to the library, and some of these were donated by THE MEDICAL JOURNAL OF AUSTRALIA and by members.

Medical Board Grant.

We began the year with a credit balance of £53 2s. The Medical Board graciously granted us £750, and by November 15 we still had £398 12s. 3d. left. The Medical Board consented to allow the remainder to be used on books for the library, and this was all spent by December 31, 1956.

While Dr. E. Saint was in America, he purchased for us many copies of missing journals, thereby completing many series in which we had previously been deficient. The cost of this was defrayed by clinical research funds. We would like to thank Professor Saint for the interest he has taken in this matter.

Medical Library of Western Australia.

A meeting of representatives of the British Medical Association, the Royal Perth Hospital and the University was held on Tuesday, August 2, 1956, to discuss matters relating to the Medical Library. At this meeting it was recommended that the British Medical Association Library be incorporated with that of the Royal Perth Hospital (excluding the nurses' library) and the library of the Medical School. This comprehensive library is to be named the Medical Library of Western Australia.

Other important recommendations were that the British Medical Association make an annual grant to the Medical Library of Western Australia to be used for the purchase of books and periodicals, leaving administrative costs to be borne by the University Medical School, and that members of the British Medical Association should have free access to the library at all hours.

A meeting of the Contracting Committee was next held on October 8, at which five members of the University staff

were present, four representatives of the British Medical Association and two representatives of the Royal Perth Hospital. This meeting was called to make arrangements for the appointment of a library committee to manage the affairs of the Medical Library of Western Australia under the control of the Senate of the University and to determine various matters connected therewith. May I detail the most important resolutions: (i) The committee shall consist of nine members, five members appointed by the University Senate, three nominees of the Council of the British Medical Association and one nominee of the Board of the Royal Perth Hospital. (ii) The University would take over the library on November 15. (iii) Subject to review, the staff of the Royal Perth Hospital shall have full access to the library. (iv) Library funds for books and journals were £3000 from the University, and £1000 from the British Medical Association for the first five years, and it was suggested that £500 be allocated for general medical books, the remainder to be allocated among the professors to be used by them, in consultation with the librarian, for the purchase of books; the purchase of journals, however, to be the direct concern of the Library Committee. (v) That the selection of general medical books be in the hands of a subcommittee of the three representatives of the British Medical Association.

After a further meeting to discuss various details such as library rules and various administrative matters, the first meeting of the Committee of the Medical Library of Western Australia was held on December 13, 1956. Important resolutions were: (i) Five hundred pounds be appropriated for books for general practitioners and other specialties not otherwise covered by the professorial units. The three British Medical Association representatives are to be responsible for the recommendation for all such books. (ii) One thousand pounds be allocated for journals and their binding. (iii) That the librarian send letters to those who have in the past subscribed and donated publications to the library, expressing the hope that they will continue this cooperation in the future. (iv) That a new bookplate be designed.

Thus the Medical Library of Western Australia is a going concern, on the committee of which we have adequate representation. British Medical Association members now have access to a library with a wide coverage, which is better stocked with reference books and journals than previously.

From the point of view of British Medical Association members, there is no difference in getting books from the library. Country members may still write in and obtain what they need; the books will be forwarded as before.

The library is open until 7.30 each evening and from 9 to 12 on Saturdays. After hours the key is obtainable from the head orderly at the hospital.

At a recent meeting of the British Medical Association representatives it was decided to circularize all groups such as College of General Practitioners, anaesthetists, psychiatrists, ophthalmologists *et cetera*, pointing out that money is available for the purchase of books on subjects not covered by the professorial units.

If British Medical Association members require a book which is not in the library, and they consider it to be of general use, they are requested to write to the librarian.

The British Medical Association representatives will be meeting regularly to consider such applications. Our grant of £500 is subject to revision at the end of the year, and we have to show that we need it.

Miss Hagan continues on as our librarian, and she has coped magnificently with the difficulties of the transition period. The Library Committee have much to thank her for. Miss Gillett, a trained librarian, has now joined the staff to assist her.

D. M. CLEMENT.
N. H. ROBINSON.
E. R. BEECH.

REPORT OF ACTIVITIES OF POST-GRADUATE COMMITTEE.

Dr. M. G. F. Donnan read the report of the Post-Graduate Committee, which was adopted. The report is as follows.

The names of post-graduate lecturers who have visited Western Australia under the aegis of this committee are recorded in the annual report of the Branch Council. The courtesy of the Royal Colleges has made possible lectures by their distinguished guests to the general body of members of the British Medical Association. Increasing numbers of overseas lecturers wish to visit Australia, and selection has been made in consideration of ability, appeal of subject matter and financial commitment of the Post-Graduate Committee.

The Post-Graduate Committee has been able to allot only two British Medical Association monthly meetings to presentation of post-graduate teaching by local persons, and these meetings were not well attended.

Some change in the pattern of post-graduate teaching can be anticipated with the establishment of a medical school in the University of Western Australia, and an invitation to assist the Post-Graduate Committee in the organization of courses and in teaching has been accepted by the Faculty of Medicine.

A course in anatomy organized by Dr. G. Bedbrook and attended by eight doctors and eleven physiotherapists was conducted this year, and arrangements are in train to conduct courses in 1957 in anatomy, physiology, pathology and pharmacology to the standard of the primary examination of the F.R.A.C.S. and of the F.F.A.R.A.C.S.

An inquiry as to whether or not country groups desired lectures from metropolitan specialists on subjects of their own choosing elicited indifferent response.

The South-West and Eastern Goldfields reported pleasure and profit from the visit of Dr. J. H. Sheldon, Category A Post-Graduate Lecturer for 1956.

Tape recordings have been made of the majority of lectures sponsored by this committee. Titles have been advertised, and there has been an encouraging demand for these recordings. It is to be regretted that erasure of past recordings becomes necessary to allow of fresh recordings being made, only those of particular interest being retained longer than three years.

The cooperation of Sir Francis Frazer, of the British Postgraduate Medical Federation, has assured members sponsored by this committee of having their needs met.

Constructive criticism of the Post-Graduate Committee's actions would indicate the interest of the profession in its activities.

M. G. F. DONNAN,
Honorary Secretary.

REPORT OF THE HONORARY TREASURER.

Dr. D. D. Keall presented the honorary treasurer's report, which was adopted. The report is as follows.

The auditors' statement shows that the finances of the Branch are in a satisfactory state, and I am pleased to report that once more income has exceeded expenditure by a substantial amount, *viz.*, £2905 3s. 4d. Income from subscriptions increased by £480. Income from the British Medical Agency Company showed an increase of nearly £700 to £1507 against £323 the year before.

On the expenditure side the notable features are a saving of £272 4s. 6d. in rent (for part of the preceding year) and an increase of £546 for salaries. Excluding these items administrative revenue from the British Medical Agency Company will continue to expand. Expenditure is, however, likely to be very heavy, as costs incurred in planning the British Medical Association building will have to be met. Interest-free loans by members of the Association have saved the Branch a considerable sum in interest and continue to be a very important factor in the finances of the Association.

D. D. KEALL.

Out of the Past.

In this column will be published from time to time extracts, taken from medical journals, newspapers, official and historical records, diaries and so on, dealing with events connected with the early medical history of Australia.

ACTION FOR DAMAGES.¹

[From the *Australasian Medical Gazette*, January 15, 1886.]

A CASE which was tried before Judge Dowling in the beginning of December was one in which a chemist was sued by a customer to recover damages to recompense him for injury sustained as a consequence of a mistake in the delivery of a certain medicine. It appears that the plaintiff had sent a receipt copied from a medical work containing confection of sena, sulphur and bitartrate of potash to be compounded whilst he received a pot of ointment intended for the treatment of a mangy dog. Of this he swallowed about a drachm on two several occasions one before and one after lunch. Each dose contained a grain and a half of green iodide of mercury, about fifteen grams of sulphure and the rest lard: therefore there was nothing in it to do any real harm. Nevertheless the man objected naturally to insert into the interior of his stomach what was intended for the exterior of a dog. He no doubt suffered from shock to his nervous system and considerable mental distress when excitedly told by the messengers who had been sent to find him that he was poisoned and when exceedingly liberal offers of the use of a stomach pump were made to him. The case resulted in a verdict of £25 to the plaintiff with costs.

Correspondence.

ILLNESS AND DEATH OF MOZART.

SIR: Whilst your liberality in discussing the medical history of Mozart must be applauded, certain aspects of your "Current Comment" deserve criticism. Leopold Mozart has been criticized many times for his alleged callous treatment of his children; it is as well therefore to review some of the facts which are known about this man, and to recall some of his statements. Leopold Mozart, the son of an Augsburg bookbinder, was a good organist, and an uncommonly good violinist. He was the author of *Versuch einer gründlichen Violinschule*, which, having been translated into several languages, was a standard work for many years. The family life of Leopold Mozart was extremely happy, and Leopold devoted himself to the welfare of wife and children. Leopold and his wife were devout Catholics. Leopold's health, however, was not consistently good. He writes to his landlord, Lorenz Hagenauer, from Linz on October 3, 1762: "I occasionally feel, here and there, some little twinges of gout." Wolfgang Mozart wrote his first symphonies (K16 and K19) in 1764 in England during a period when he was forbidden to play any instrument: his father was at that time recovering from an illness which Leopold himself

¹From the original in the Mitchell Library, Sydney.

described as a fever and throat inflammation. In 1772, during an Italian visit by father and son, the departure from Milan was delayed by Leopold's rheumatism.

The house in which the family lived in Salzburg has been described as damp and draughty—a description which would have fitted most of the houses in that town. Seven children were born in that house to Leopold and his wife, but only Wolfgang and one sister, Nannerl, survived. From the age of three, when he sat at the keyboard picking out thirds, Wolfgang displayed his amazing musical gift. Leopold said more than once that he held it to be his duty before God and the world to further the inconceivable talent as a gift sent from above. The Mozarts had a problem, which was similar to that of the Menuhins, in how to deal with the tremendous desire of the child prodigy to learn, to practise, and to play.

The most far-reaching question which can be asked at this point is that if genius can be guided at all, how should this guidance be accomplished? There is ample evidence from both contemporary and historical sources to make a prima-facie proposal that extreme talent and genius are associated more frequently than would be expected by chance with defects of character, behaviour, or perception which, to some extent at least, preclude a normal relationship with society. There can be no doubt that Wolfgang Mozart had great difficulty in conducting a normal life, and apparently his father was aware of this. Phases of Wolfgang Mozart's adult life seem more fitted for the bordello period of New Orleans jazz than any other musical era. This was no passing phase, but was a trait which Wolfgang had for some years and which was revealed in his letters (particularly his letters to "die Basile", his cousin Maria Anna Thekla—for instance, the coprolalia in the letter dated February 28, 1778).

Leopold's training of his son therefore had a good basis and was excellent both musically and otherwise. Leopold comments that Wolfgang was always wanting to absorb more musical knowledge and that it formed a passion which would not let him go. Wolfgang always pursued unrestrainedly things which took his fancy. When, as a child, he was learning arithmetic the walls of the rooms and the furniture within the Mozart house were covered with chalked figures.

Although the travels undertaken by the Mozart family were strenuous, Leopold took great care of his family. He wrote to Hagenauer from Linz on October 19, 1762: "I must travel slowly on account of my children, so they may rest now and then for a few days, and not fall ill." From Linz the family moved to Vienna, and on October 30, 1762, Leopold wrote to Hagenauer, describing amongst other matters the illness of Wolfgang: "God has sent us a small cross, and we must thank His infinite goodness that things have turned out as they have . . . as he was going to bed complained of his backside and hips. When he got into bed I examined the places where he said he had pain, and found a few spots as large as a kreutzer, very red and slightly raised and painful to touch. But they were only on his shins, on both elbows, and a few on his posterior, altogether there were very few. He was feverish and we gave him a black powder and a margrave powder. These were repeated the next day (Friday). . . . On Sunday he began to sweat. . . . I met the physician of the Countess von Zindendorf . . . and gave him particulars. He at once came back with me and approved of what we had done. He said it was a kind of scarlet fever rash. . . . Dr. Bernhard (that is his name) could hardly be more attentive than he is. Meanwhile this affair has cost me fifty ducats at least. But I am infinitely grateful to God that it has turned out so well. These scarlet fever spots, which are a fashionable complaint for children in Vienna, are dangerous."¹

The illness of Wolfgang in 1791 drew this letter from Leopold to Nannerl (Salzburg, September 14, 1784): "My son has been very ill in Vienna. At a performance of Paisiello's new opera he perspired so profusely that his clothes were drenched . . . so that not only my son, but a number of other people caught rheumatic fever, which became septic when not taken in hand at once. My son writes: four days running at the very same hour I had a fearful attack of colic, which ended each time in violent vomiting . . . my doctor is Sigmund Barisani . . . he has been almost daily at my rooms."

After the journey to Paris with his mother many changes occurred; he was now no longer a child prodigy but an unprepossessing youth; his mother died, and he began a series of disastrous affairs. He left his father's house, and as a result of some sordid intriguing married Constanze Weber. They lived a nomad, harum-scarum existence punctuated by six pregnancies producing two live children. Constanze did no housekeeping and left Mozart on his own

for long periods. In 1791, whilst Constanze was away in Baden, Mozart began a long carousal with Schikaneder. On December 5 at fifty-five minutes past midnight he died.

After Mozart's death Salleri began and continued a benevolent interest in Wolfgang's son. This act was not surprising, as Salleri and Mozart, although rivals, were quite friendly, and Salleri was noted as a most charitable man.

I think we can acquit Leopold of callousness, and indeed in view of Mozart's adult life his journeys probably harmed him little. Certainly Leopold looked after his family well, and translated a good deal of his son's potential into useful activity.

I hope, sir, that this communication has added something to your interest in the medical history of the Mozart family, and done something toward focusing attention on a greater medical matter: that is, the psychological reasons for the behaviour and perception of the chronologically adult genius.

Yours, etc.,

W. GORDON WATERLOW.

18 Lyne Road,
Cheltenham,
New South Wales.
May 9, 1957.

SIR: Somewhere in the early thirties I gave an address to the Musical Association of Queensland on the illnesses of Beethoven and Schumann and on the modes of death of Mozart and Schubert. In your number of May 4, 1957, you discuss the mode of death of Mozart. At the time I wrote my essay, I had read every available biography of the composer in English. The eminent authority Grove, and others whose names I now forget, state that the death certificate of Mozart attributed his death to typhus. I found this completely untenable, and concluded, as does your article, that Mozart died of nephrosclerosis, either as a sequel of scarlatina or of pyelonephritis. At the time I wrote I could find insufficient evidence of the poisoning of which Mozart complained and am still sceptical. I attributed the abnormal taste to that commonly complained of in the terminal stages of uræmia.

Yours, etc.,

J. V. DUHIG.

Ballow Chambers,
Wickham Terrace,
Brisbane.
May 7, 1957.

Post-Graduate Work.

THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

Post-Graduate Conference at Katoomba.

THE Post-Graduate Committee in Medicine in the University of Sydney, in conjunction with the Blue Mountains Medical Association, will hold a week-end post-graduate conference in the ballroom at the Carrington Hotel, Katoomba, on Saturday and Sunday, June 29 and 30, 1957. The programme is as follows:

Saturday, June 29: 2 p.m., registration; 2.30 p.m., "Toxic Liver Injury with Special Reference to Chemicals and Drugs", Professor C. R. Bickerton Blackburn; 4 p.m., "The Medical Witness", Mr. Antony Larkins, Q.C.

Sunday, June 30: 10.30 a.m., "Management of Infections of the Fingers", Dr. Noel Newton; 12 noon, "The Doctrine of the Scintilla", Mr. Antony Larkins, Q.C.; 2.30 p.m., "Impaired Renal Function: Management of the Patient", Professor C. R. Bickerton Blackburn; 4 p.m., "The Management of Common Ano-Rectal Conditions", Dr. Noel Newton.

Inclusive fee for attendance is not less than £8 8s. The fee for attendance at lectures only is £4 4s. Those wishing to attend the course are requested to communicate as soon as possible with Dr. Nicholas Larkins, Honorary Secretary, Blue Mountains Medical Association, 199 Katoomba Street, Katoomba. Telephone: Katoomba 111.

Post-Graduate Conference at Broken Hill.

The Post-Graduate Committee in Medicine in the University of Sydney, in conjunction with the Broken Hill Medical Association, will hold a post-graduate conference at the Broken Hill and District Hospital on Saturday, June

¹ The translation of Emily Anderson.

15, 1957. Mr. C. P. Wilson, C.V.O., F.R.C.S., Senior Ear, Nose and Throat Surgeon at the Middlesex Hospital, London, and Director of the Ferens Institute of Pathology, who will be visiting Australia at the invitation of the Oto-Laryngological Society of Australia (British Medical Association) and the Post-Graduate Federation in Medicine, will be guest lecturer. The programme is as follows: 9.30 a.m., "The Deafness of Advancing Years", Mr. C. P. Wilson; 10.45 a.m., "Some Emotional Aspects of Physical Illness", Professor W. H. Trethowan; 11.45 a.m., "Lumps in the Breast: Modern Trends in Their Management", Mr. F. F. Rundle; 2 p.m., "Exudative Otitis Media", Mr. C. P. Wilson; 3 p.m., "The Early Diagnosis of Psychiatric Disorders", Professor W. H. Trethowan; 4.15 p.m., "Radiolodine Versus Surgical Thyroidectomy: Their Respective Applications", Mr. F. F. Rundle.

The fee for attendance at the course will be £5 5s., and those wishing to attend are requested to communicate as soon as possible with Dr. F. Schlunk, Honorary Secretary, Broken Hill Medical Association, 252 Mica Street, Broken Hill. Telephone: Broken Hill 865.

Annual Subscription Course.

THE Post-Graduate Committee in Medicine in the University of Sydney announces that Mr. C. P. Wilson, C.V.O., F.R.C.S., Senior Ear, Nose and Throat Surgeon, Middlesex Hospital, London, and Director of the Ferens Institute of Pathology, will visit Sydney from June 9 to 17, 1957. Mr. Wilson will give the following lectures, which have been arranged in conjunction with the Oto-Laryngological Society of Australia (British Medical Association): At the Stawell Hall, 145 Macquarie Street, Sydney, at 8.15 p.m.: Tuesday, June 11, "Post-Nasal Tumours"; Wednesday, June 12, "Sneezing, Snuff and Smoking"; Thursday, June 13, "Laryngeal Paralysis". At the Scot Skirving Lecture Theatre, Royal Prince Alfred Hospital: Wednesday, June 12, at 10 a.m., "Choanal Atresia". At the Maitland Lecture Theatre, Sydney Hospital: seminar; Wednesday, June 12, at 2.15 p.m., "Cancer of the Hypopharynx". At Broken Hill: "The Deafness of Advancing Years", and "Exudative Otitis Media". The last two lectures will form part of the week-end country conference, to be held at Broken Hill on Saturday, June 15, 1957.

Post-Graduate Conference at Hornsby.

The Post-Graduate Committee in Medicine in the University of Sydney, in conjunction with the Kuring-gal Medical Association, will hold a Post-Graduate Conference at the Hornsby and District Hospital on Saturday and Sunday, June 8 and 9, 1957. The programme is as follows:

Saturday, June 8: 2 p.m., "Some Paediatric Miniatures: (a) The Toddler with Chronic Diarrhoea, (b) The Jaundiced Neonate, (c) The Child with Recurrent Bronchitis", Dr. D. G. Hamilton; 3.30 p.m., "The Significance of Haematuria", Dr. John McNamara.

Sunday, June 9: 9.30 a.m., "Diagnosis and Treatment of Thyroid Disease, Including the Use of Radio-iodine", Dr. Hales Wilson; 11 a.m., "The Epileptic Child", Dr. D. G. Hamilton.

The fee for attendance at this course is £2 2s., and those wishing to attend are requested to notify Dr. R. B. Geeves, Honorary Secretary, Kuring-gal Medical Association, 2 Hillcrest Road, Pennant Hills, as soon as possible. Telephone: WJ 1649.

University Intelligence.

UNIVERSITY OF SYDNEY.

THE following information is taken from *The Gazette* (University of Sydney), April, 1957:

The Senate has conferred the title of Emeritus Professor upon Professor Sir Harold Dew, Professor C. G. Lambie and Professor C. W. Stump, all of whom retired during 1956. Professor Sir Harold Dew held the Bosch Chair of Surgery from March, 1930, Professor Lambie held the Bosch Chair of Medicine from July, 1930, and Professor Stump held the Bosch Chair of Histology and Embryology from February, 1928.

Sir Charles Bickerton Blackburn has been reelected Chancellor for the next three years. Sir Charles has been a member of the Senate since 1919 and Chancellor since 1941.

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED MAY 4, 1957.¹

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.	Australia.
Acute Rheumatism	1	2(2)	..	..	..	..	..	..	3
Amoebiasis .. ..	..	..	..	..	..	..	..	..	..
Ancylostomiasis	5	..	..	..	..	..	..	..	5
Anthrax .. ..	..	..	..	..	..	..	..	..	..
Bilharzias .. ..	..	..	..	..	..	..	..	..	..
Brucellosis	1(1)	2(1)	..	..	..	..	..	..	3
Cholera .. ..	..	1(1)	..	..	..	..	..	..	2
Chorea (St. Vitus)	1	..	..	..	..	..	..	..	..
Dengue	1(1)	15(15)	1(1)	..	..	..	1	1	19
Diarrhoea (Infantile)	5(1)	2(2)	..	..	..	8	..	..	15
Dysentery (Bacillary) .. ..	..	1	1	..	4(4)	..	2	..	8
Encephalitis	1	1(1)	..	..	..	..	..	..	2
Filariasis .. ..	..	..	..	..	..	..	..	..	..
Homologous Serum Jaundice .. ..	..	..	..	..	..	..	..	..	..
Hydatid .. ..	..	..	..	1(1)	1	..	1	..	55
Infective Hepatitis	31(15)	24(11)	..	..	..	..	..	..	..
Lead Poisoning .. ..	..	..	..	..	..	..	1	..	1
Leprosy .. ..	..	..	..	..	..	..	..	..	..
Leptospirosis	1	..	4	..	..	..	..	..	5
Malaria .. ..	..	..	..	..	..	..	..	..	..
Meningococcal Infection .. ..	..	3(2)	..	1	..	..	..	..	4
Ophthalmia .. ..	..	..	..	..	..	..	..	..	..
Ornithosis .. ..	..	..	..	..	..	..	..	..	..
Paratyphoid .. ..	..	..	..	..	..	..	..	..	..
Plague .. ..	..	..	..	..	..	..	..	..	..
Polomyelitis	2	..	..	..	..	..	..	..	2
Psittacine Fever	3(3)	..	..	..	..	..	..	..	3
Rubella .. ..	..	23(21)	..	4(1)	1(1)	..	..	..	23
Salmonella Infection .. ..	..	..	..	..	..	..	..	..	..
Scarlet Fever	17(12)	25(16)	4(3)	9(7)	8(8)	..	1	..	64
Smallpox .. ..	..	..	..	..	..	..	..	..	..
Tetanus .. ..	..	..	1	..	1	..	..	..	1
Trachoma .. ..	..	..	..	..	..	..	..	..	..
Trichinosis .. ..	..	..	..	..	..	..	..	..	..
Tuberculosis	24(12)	17(13)	5	2(2)	2(2)	4(1)	..	..	54
Typhoid Fever .. ..	..	..	..	..	..	..	..	..	..
Typhus (Flea-, Mite- and Tick-borne) .. ..	..	..	2	..	..	..	..	..	2
Typhus (Louse-borne) .. ..	..	..	..	..	..	..	..	..	..
Yellow Fever .. ..	..	..	..	..	..	..	..	..	..

¹ Figures in parentheses are those for the metropolitan area.

Professor J. L. Still, Professor of Biochemistry, has been elected a Fellow of the Senate and is to be Dean of the Faculty of Science for the unexpired term ending December 31, 1957.

Dr. K. W. Cleland has been appointed to the Bosch Chair of Histology and Embryology. Dr. Cleland graduated bachelor of medicine and bachelor of surgery from the University of Sydney in 1945 and has since held positions in the University as lecturer and senior lecturer in cytology. In 1951 and 1952, as a Nuffield Dominions Fellow in the Natural Sciences, he worked in a number of research institutions in Great Britain.

Dr. K. V. Smith has been appointed to a senior lectureship in pathology.

Dr. G. W. Milton has been appointed to a senior lectureship in surgery.

Dr. D. C. Maddison has been appointed to a senior lectureship in psychiatry.

Dr. J. P. Halliday has been appointed lecturer in surgery.

The following members of staff have been promoted from the grade of lecturer to that of senior lecturer: Dr. R. H. Black, Department of Tropical Medicine; Dr. F. W. A. Clements, Department of Child Health.

Public Health.

SUMMER SCHOOL IN HEALTH EDUCATION.

A SUMMER SCHOOL in health education, under the auspices of the Central Council for Health Education, will be held at Neuadd Reicheil, Bangor, North Wales, from August 20 to 30, 1957. The subject will be "The Promotion of Health and the Techniques of Health Education", and the school is intended for doctors, nurses, health inspectors, teachers and auxiliary health and social welfare workers from various fields and different countries. The fee is £21 (sterling) for tuition and full residence. Application to participate in the school should be made to The Medical Director, The Central Council for Health Education, Tavistock House, Tavistock Square, London, W.C.1, England.

Notice.

ARCHIVES OF PHYSICAL MEDICINE AND REHABILITATION.

We have been asked to make the following announcement:

The editorial board of the *Archives of Physical Medicine and Rehabilitation* has established a special subscription rate of \$5 per year to be granted to bonafide residents in physical medicine and other specialties in the United States, its territorial possessions, Mexico, Canada, the United Kingdom and Europe. The following rules apply: (i) The subscription may be entered for a period not to exceed three years. (ii) All orders for this special rate must be accompanied by a letter of verification from the director of the training programme confirming the resident's status and the number of years remaining in the resident's training programme. (iii) This special rate is not applicable if less than one year of training remains to be completed in the applicant's residency programme. (iv) The subscription is not transferable and must be entered in the resident's name. It cannot be sent to a hospital, organization or institution, or to a person other than the subscriber.

Those desiring to avail themselves of the special rate to residents should write to *Archives of Physical Medicine and Rehabilitation*, 30 N. Michigan Avenue, Chicago 2, Illinois, United States of America.

Medical Appointments.

Dr. W. Park has been appointed Medical Officer, State Government Insurance Office, Brisbane.

Dr. W. J. Waga has been appointed Medical Officer, Brisbane Mental Hospital, Goodna, Queensland.

Dr. N. H. Morgan has been appointed a member of the Physiotherapists Registration Board, New South Wales.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Varo, Gisela, licensed under Section 21 (b) of the *Medical Practitioners Act*, 1938-1955, Auburn District Hospital, Auburn, New South Wales.

Stylls, Stanley Chris, M.B., B.S., 1956 (Univ. Sydney), 2 Cedar Avenue, Windang, New South Wales.

Deaths.

THE following death has been announced:

GUNDY.—Derek Laurance Gundry, on May 3, 1957, at Melbourne.

Diary for the Month.

- MAY 28.—New South Wales Branch, B.M.A.: Ethics Committee.
MAY 30.—South Australian Branch, B.M.A.: Clinical Meeting.
MAY 30.—New South Wales Branch, B.M.A.: Branch Meeting.
JUNE 4.—New South Wales Branch, B.M.A.: Organization and Science Committee.
JUNE 5.—Western Australian Branch, B.M.A.: Branch Council.
JUNE 5.—Victorian Branch, B.M.A.: Clinical Meeting.
JUNE 6.—South Australian Branch, B.M.A.: Council Meeting.
JUNE 7.—Queensland Branch, B.M.A.: General Meeting.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): All contract practice appointments in New South Wales.

Queensland Branch (Honorary Secretary, B.M.A. House, 235 Wickham Terrace, Brisbane, B17): Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 80 Brougham Place, North Adelaide): All contract practice appointments in South Australia.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2551-3-3.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such notification is received within one month.

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in the Commonwealth can become subscribers to the journal by applying to the Manager or through the usual agents and book-sellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rate is £5 per annum within Australia and the British Commonwealth of Nations, and £6 per annum within America and foreign countries, payable in advance.